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In an effort to improve vocational-technical education in Montana, the 1967 legislative assembly requested a private survey to examine public education in the state and make recommendations. Some major conclusions were: (1) Junior and community colleges had little impact on vocational-technical education, (2) The state staff organization was not conducive to program growth and development, (3) The small high school districts in the state limited the growth of vocational-technical education, (4) The contribution of the vocational advisory council was minimal, (5) The educational effort reflected a degree of confusion, lack of communication, and laggardness, (6) Professional and lay groups showed a high level of interest in vocational-technical education, and (7) High school programs were not always geared to current needs in business and industry. Some major recommendations were: (1) the development of increased communication between educational leaders and lay leaders, (2) organization of the state's educational system, (3) development of four to six post high vocational-technical centers covering large geographic areas, (4) more effort and financial resources devoted to planned research, (5) development of an expanded vocational-technical education program, and (6) improvement and clarification of certification requirements. (DM)

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Report of a Statewide Survey

by

A 10-Member Survey Staff

SCHOOL SURVEY SERVICE*
709 STINSON DRIVE
COLUMBUS, OHIO 43214

1968

*A Division of COOPERATIVE EDUCATIONAL ENTERPRISES, INC.

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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School
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SCHOOL SURVEY SERVICE*
709 STINSON DRIVE
COLUMBUS, OHIO 43214

1968

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THE SURVEY STAFF

Professional Staff

Dr. W. R. Flesher, President, Cooperative Educational Enterprises, Inc., Columbus, Ohio; *Director of the Survey*

Dr. Marie A. Flesher, Secretary-Treasurer, CEE, Inc., Columbus, Ohio; *Associate Director*

Dr. Robert M. Reese, Director of Trade and Industrial Education and Professor of Education, The Ohio State University, Columbus, Ohio; *General Consultant for Vocational Education*

Dr. Melvin L. Barlow, Director, Division of Vocational Education, University of California; Professor of Education, University of California at Los Angeles; and Director, National Advisory Council for Vocational Education, Washington, D. C.; *Special Consultant for Technical Education*

Mr. A. R. Bunger, Former State Director of Vocational Education and (earlier) State Supervisor of Agricultural Education, Denver, Colorado; *Special Consultant for Agricultural Education*

Mr. Samuel L. Fick, Former State Supervisor of Trade and Industrial Education, Sacramento, California; *Special Consultant for Trade and Industrial Education*

Dr. Peter G. Haines, Director of the Research and Development Program in Vocational-Technical Education and Chairman of the Business and Distributive Teacher Education Department, Michigan State University, East Lansing, Michigan; *Special Consultant for Distributive Education*

Mr. John G. Odgers, Director, Division of Guidance and Testing, State Department of Education, Columbus, Ohio; *Special Consultant for Vocational Guidance*

Mrs. Genevieve Pieretti, State Supervisor of Home Economics Education, Carson City, Nevada; *Special Consultant for Home Economics Education*

Miss Josephine Sawaia, Chairman, Department of Business Education, Scottsdale High School, Scottsdale, Arizona; *Special Consultant for Office Education*

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Mrs. Barbara R. Powell, Helena; *Secretary* and *Office Manager*

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FOREWORD

On June 6, 1967 W. R. and Marie A. Flesher, of COOPERATIVE EDUCATIONAL ENTERPRISES, Inc., Columbus, Ohio, met in Great Falls, Montana with a subcommittee of the Montana State Board of Education to discuss a possible statewide survey of vocational-technical education. Approximately two months later (August 2, 1967) the Montana State Board of Education entered into a contract with CEE, Inc. for the survey.

The survey directors were in residence in Helena, Montana from September 25, 1967 to February 12, 1968. Survey offices were opened in the State Capitol on October 1, 1967 and closed on February 12, 1968. The survey directors were assisted by eight out-of-state specialists in vocational-technical education. They were from six different states, four of which were in the Western states group. The Survey Staff collectively spent approximately 14 months in field work in Montana.

The Preliminary Report of the Survey Staff was prepared under date of January 31, 1968. Copies of the tentative major findings and conclusions, in mimeographed form, were mailed in advance of the reporting session to the State Board of Education and the State Vocational Advisory Council on February 1 for study. The tentative recommendations of the Survey Staff were presented in mimeographed form and orally to the State Board and Advisory Council at an afternoon meeting at the State Capitol on February 11, 1968. All 10 members of the Survey Staff were at the reporting session. Only a portion of the State Board of Education were present.

Following the Preliminary Reporting session, the members of the Survey Staff completed their respective sections of the final report. This final report of the survey is herewith presented.

The Survey Staff wishes to acknowledge with thanks the assistance of the many people in Montana who through interviews and conferences and through the return of survey instruments assisted greatly in providing needed information about vocational-technical education in Montana and the many problems related to it. Appreciation is expressed also to Miss Harriet Miller, State Superintendent of Public Instruction, and her staff for making available to the Survey Staff various types of information requested and for providing other kinds of assistance.

It is the hope of the entire Survey Staff that Montana may profit greatly from this report, which gives the State leadership a definite blueprint for action.

Columbus, Ohio
May 1, 1968

W. R. Flesher
Marie A. Flesher

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**This section deals primarily with office (and business) education.

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CHAPTER 1[*]

THE SETTING FOR THE SURVEY

Chapter 1 has for its primary purpose the provision of a kind of backdrop against which the subsequent chapters of the report will be presented and in terms of which their content can be interpreted by the reader. Certain general background information in this opening chapter will, therefore, help to illuminate the rest of the report.

Guiding Principles for Educational Surveys

Principles for conducting and reporting educational surveys are needed as guidelines to a survey group making such a study. Such guidelines can be used also by any governing board desiring to choose an organization or agency for conducting an educational survey. Surveys are sometimes criticized because there is an apparent lack of enunciated or demonstrated guidelines governing the activities of the study staff.

The 24 principles set forth in this section were first presented in writing in the report of the statewide survey of Oregon.[1] These principles represent the "ground rules" by which SCHOOL SURVEY SERVICE (a Division of COOPERATIVE EDUCATIONAL ENTERPRISES, INC.) conducts and reports its school surveys. These principles are the experiential derivatives of more than two decades of survey work - survey work that has been viewed evaluatively as it was being conducted. The order of presentation of the 24 principles does not indicate their relative importance, nor does it indicate any sequence of procedure.

1. The members of a survey study group constitute a _staff_ rather than a group of individual specialists working independently of one another; and the survey report, in so far as possible, reflects this point of view.

2. The survey project is looked upon by the staff as well as by those for whom the survey is being made as a _research enterprise._

3. A survey staff member recognizes that the role of the _surveyor_ is quite different from that of a _consultant,_ that a survey is more panoramic in its purpose than an _intensive study,_ and that it emphasizes breadth rather than depth.

4. The survey efforts reflect perspective in terms of the total district or geographical area under study and the total aspects or phases of the problem under consideration.

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[*] Written principally by W. R. Flesher, Marie A. Flesher, and Robert M. Reese.

[1] W. R. Flesher, Marie A. Flesher, Robert M. Reese, and others, _Public Vocational-Technical Education in Oregon: Report of a Survey Made for the Oregon State Board of Education,_ 1958, pp. 4-6.

5. The survey staff recognizes the unique characteristics of the situation being studied, and the staff is not content merely to import as a solution a plan in use elsewhere simply because it is in use elsewhere.

6. The survey staff gives appropriate consideration to established lines of authority and existing patterns of relationships and attempts to build intelligently upon what already exists or has gone before.

7. The survey methodology is such as to draw upon many sources of information and to utilize a number of different fact-finding and fact-gathering techniques.

8. The survey staff seeks relevant objective and verifiable data but is seriously concerned also with the opinions and desires of various interested groups and individuals, recognizing that while opinions and desires are not in themselves facts, their existence IS a fact.

9. The survey staff guards against being unwisely led into a consideration of only the controversial or more interesting aspects of the situation but is comprehensive in its approach within the limits established as a part of the authorization of the survey.

10. The survey is focused primarily upon purposes, programs, plans, and positions, not upon personalities and not solely upon precedents.

11. The study of any segment of the public educational effort of any state or community includes some consideration of all other segments of educational effort in the state or community.

12. The survey staff, in striving for high levels of objectivity in its reporting, guards against the types of candor that may be harmfully objectionable.

13. The members of the survey staff are protected as professional workers in regard to the integrity of their individual reports; in some instances this may be assured only through the inclusion of minority recommendations or statements in the final report.

14. The survey report draws upon the background of experience and knowledge of the survey staff, and in this sense and to this degree it tends to become subjective - but subjective in terms of sophisticated judgments.

15. Data to be included in the survey report are carefully selected for inclusion in terms of their relevance to the major problems of the survey.

16. The survey recommendations reflect a long-range view regarding the solution of the problem under study and, where necessary or desirable, indicate priorities of action among those recommendations implying a sequence of events.

17. The special importance of the distribution of population in the geographical area under study is reflected in the survey recommendations in a variety of ways.

18. The survey proposals are realistic in terms of the major factors related to the specific purposes of the survey.

19. The recommendations of the survey staff include sufficient detail to serve as an adequate guide to future action but not so much detail as to deprive responsible people of their rights and responsibilities in carrying the proposed plan forward.

20. The recommendations of the survey staff are unequivocal and include no alternative proposals although the deliberative portion of the report may include a

discussion of the "pros" and "cons" of certain alternatives considered in formulating a recommendation.

21. The survey recommendations are educationally sound, administratively desirable and feasible, and financially possible and efficient.

22. The survey staff considers as very important recommendations concerning items which might be termed "things of the spirit" - changes in point of view, new ways of organizing and using personnel and materiel that already exist, or better ways of working together for common ends or mutual assistance.

23. The various specific recommendations of the survey are consistent with some type of overall, or master, plan which is either impiled or explicitly stated in the survey report.

24. The survey report is concise, understandable, and usable; points out the major implications of its proposals; and suggests possible means for implementing these proposals.

Scope and General Plan of the Montana Survey

The major steps leading to the authorization of the Survey are indicated in the Foreword of this report. It should be pointed out here that the 1967 Legislative Assembly, through its enactment of House Joint Resolution 23, requested that such a study be made. The study, therefore, was a mandate by the people's voted representatives, and the people should rightfully expect the Legislative Assembly to do something about those recommendations of the Survey Staff as set forth in this report which require legislative consideration.

The survey was Statewide in geographical scope but was limited primarily to public educational effort in Montana. The study dealt basically with vocational-technical education in the high schools and in the area schools. At the higher education level the focus was on only the preparation of teachers for the various vocational-technical courses or programs.

Survey offices were established in the State Capitol and were in operation from October 1, 1967 to February 12, 1968. The two survey directors were in residence in the capital city (Helena) during this period.

A Survey Staff of 10 professional persons was used. All 10 were from outside Montana. Eight members of the group are specialists in various phases of vocational-technical education. The two others represent general education but are specialists in survey work. In fact, the broad experiences of the Survey Staff, nationally and internationally, became an important part of the survey data.[2] The fact that the Survey Staff members were all from states other than Montana means that they could be, and were, completely objective regarding the State and its problems, educational and otherwise. Collectively the Survey Staff spent the equivalent of more than one year in Montana (56 weeks).

The procedures followed in the survey included visitations, conferences, and interviews with both lay and professional persons, the study of relevant records and reports, and the use of a variety of data-gathering instruments, most of which were administered by mail.

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[2] See page v of the prefatory section of this report for the names, professional affiliations, and survey assignments of the various members of the Survey Staff.

A total of approximately 50 different secondary schools, located in one-half of Montana's 56 counties, were visited, classes observed, and interviews held with school administrators, teachers, and others. In these visitations the physical facilities for conducting classes were observed and evaluated.

A total of 275 interviews were held by members of the Survey Staff with professional persons in the various schools and colleges visited and in the State Department of Public Instruction. Included in the visitations by the Survey Staff were the two area vocational schools (Helena and Missoula), the three community colleges (Dawson College in Glendive, Miles Community College in Miles City, and Flathead Valley Community College in Kalispell), and three of the six units of the University System (Northern Montana College at Havre, the University of Montana at Missoula, and Montana State University at Bozeman). As pointed out earlier, the contacts in higher education were limited to those efforts made in the preparation of high school teachers of vocational-technical courses.

Various types of relevant records and reports - local, State, and Federal - dealing directly or indirectly with vocational-technical education, were examined. To secure this type of information, contacts were made with such organizations and agencies as the following: the State Department of Public Instruction (Montana), the State Employment Service (Montana), the Department of Planning and Economic Development (Montana), the State Chamber of Commerce (Montana), the Eight-State Project (Denver), the Education Commission of the States (Denver), the Montana Retail Association, the Montana Bankers Association, the Montana Education Association, the State Department of Agriculture (Montana), the State Board of Equalization (Montana), the Montana University System, the Bureau of Business and Economic Research (University of Montana), the Mountain States Telephone Company (Helena), the Upper Midwest Research and Development Council (Minneapolis), the National Education Association (Washington), and the United States Office of Education (Washington).

Members of the Survey Staff also interviewed approximately 130 lay leaders in business, industry, government, labor, and education.[3] In addition, many of these were contacted in other ways.

In studying various records and reports concerning vocational-technical education in Montana and other states, the Survey Staff decided at the outset of the study to use the 11 Western states as the group for comparative purposes. Since geographically they have much in common, this group of states is often used as a basic comparative group. The tables showing the comparisons for these states can be used also to get comparisons among the eight Mountain states should the reader prefer to exclude the three Pacific Coast states. The 11 Western states are Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

In the course of the survey, members of the Survey Staff traveled approximately 17,500 miles by car, bus, and plane. The greater portion of this travel was in the western half of Montana, which has the larger number of urban centers and consequently the greater portion of the State's population.

The Survey Staff utilized in Montana a variety of questionnaires, opinionnaires, and check lists designed to fit the Montana situation and the groups to whom they were sent.[4]

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[3] A later section of Chapter 1 is devoted to a summary of the results of the interviews and conferences with these lay leaders. Mention will also be made of some of these interviews in subsequent chapters of the report.

[4] More detail will be given about the use of these survey instruments in a later section of this chapter. Subsequent chapters will reflect some of the results from their use.

The instruments which were mailed went to 12 professional groups and 11 lay groups in Montana. In addition, questionnaires were sent to the 50 chief state school officers throughout the United States, from whom an 88 per cent response was received.

Montana's Organization for Vocational-Technical Education

Vocational-technical education in Montana, along with all other aspects of public educational effort, is served by a single board of 11 members. This group serves as the State Board of Regents for the Montana University System, the State Board of Education for public schools (kindergarten through grade 12), and the State Board for Vocational Education for the reimbursed (Federally supported) vocational-technical education programs in the comprehensive high schools, the area schools, and certain units of the University System.

Eight of the 11 members are appointed by the Governor for eight-year overlapping terms. They may be reappointed for successive eight-year terms and apparently often are. The Governor, by law, serves as the President of the Board. There are two other *ex officio* members of the 11-member group: the State's Attorney General (who serves as legal counsel) and the State's Superintendent of Public Instruction, who is designated by law as the Board's Secretary and the Executive Officer of Vocational Education. All *ex-offico* members are elected by the people on a Statewide ballot. One incongruity is quickly evident: the State Superintendent is a voting member of a Board for which he is also an executive officer as regards at least vocational education. He thus helps to make the policy which he then executes; in short, he is his own boss in this one regard. Concerning this point, an out of-state-professional group 10 years ago said:

> ...the Superintendent sits as a member and secretary of the board and, in effect, sits in judgment of himself when the discharge of board responsibilities by the superintendent or his staff is evaluated. This is neither sound or [*sic*] defensible practice.[5]

As a Board of Regents, this 11-member group has under its supervision the six units of the Montana University System. Table 1 shows the enrollments of these units for the most recent six-year period. In general, enrollment growth has been small, with one unit showing a loss in the 1967-68 academic year. The largest enrollment in any of the units is below 7,000, which, in terms of higher education enrollments throughout the nation, would be considered relatively small.

Table 2 shows for the most recent three years the holding power of the six units from the freshman year to the senior year three years later. Three of the units have good holding power; the three others are quite low, with Montana Tech being the lowest for each of the three years.

The Survey Staff believes that there is a serious question as to whether at the state level a single board of education can serve well the three major functions of (a) higher education, (b) public education (kindergarten through grade 12), and (c) vocational, technical, and adult education. There is a natural tendency for a group serving these three functions to spend more time on higher education because (a) it is administered directly from the state level, (b) it represents the summit of a state's public system of education, and (c) it somehow seems more "glamorous" with large campuses, interstate and intersectional athletics, many types of research, etc., etc. The Peabody study of 1958 stated, "Of more serious concern to public education is the apparent fact that the [Montana] State Board of Education devotes most of its time and attention to problems of higher education.[6]

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[5] Division of Surveys and Field Services, George Peabody College for Teachers (Nashville, Tennessee), *Public Schools of Montana: a Report to Montana Taxation-Education Commission*, 1958, p. 3.

TABLE 1

ENROLLMENTS* IN THE MONTANA UNIVERSITY SYSTEM, BY INSTITUTION
1962 THROUGH 1967

Institution	1962	1963		1964		1965		1966		1967	
	No.	No.	%#	No.	%	No.	%	No.	%	No.	%
Univ. of Montana	4,334	4,746	10	5,307	12	5,866	11	5,986	2	6,407	7
Montana State	4,608	4,739	3	5,194	10	5,887	13	6,268	7	6,768	8
Montana Tech	398	471	18	508	8	600	18	614	2	589	-4
Western Montana	603	626	4	719	15	819	14	909	11	912	**
Eastern Montana	1,812	1,916	6	2,162	13	2,621	21	2,817	8	3,145	12
Northern Montana	815	826	1	907	10	1,089	20	1,288	18	1,284	**
Total	12,570	13,324	6	14,797	11	16,882	14	17,882	6	19,105	7

Source: Office of the Executive Secretary, the Montana University System, Helena, Montana.

* As of November 1 each year.

# Of change from the immediately preceding year.

** Less than .5 per cent; actually .3 for Western and -.3 for Northern.

TABLE 2

HOLDING POWER* OF THE MONTANA UNIVERSITY
SYSTEM, BY YEAR, 1965 THROUGH 1967

Institution	Per cent holding power* in					
	1965		1966		1967	
	Per cent	Rank	Per cent	Rank	Per cent	Rank
University of Montana	68.3	2	66.0	2	61.4	3
Montana State	62.5	3	68.1	1	63.4	1
Montana Tech	21.3	6	13.8	6	13.8	6
Western Montana	72.4	1	60.7	3	62.3	2
Eastern Montana	33.4	4	33.0	4	35.8	4
Northern Montana	21.7	5	27.3	5	23.5	5
Total	53.2	--	54.5	--	51.9	--

Source: Office of the Executive Secretary, the Montana University System, Helena, Montana.

* The number of seniors for a given year as a per cent of the number of freshmen three years earlier.

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[6] *Ibid.*, p. 2.

The organization within the State Department of Public Instruction for vocational-technical education is shown in Figure 1. It can be noted that the area of vocational-technical education is not a separate division within the State Department but is a part of the Division of Instructional Services. The State staff for vocational-technical education apparently never meets as a separate staff to consider items peculiar to this group. The weekly staff meetings are for members of the entire Division of Instructional Services.

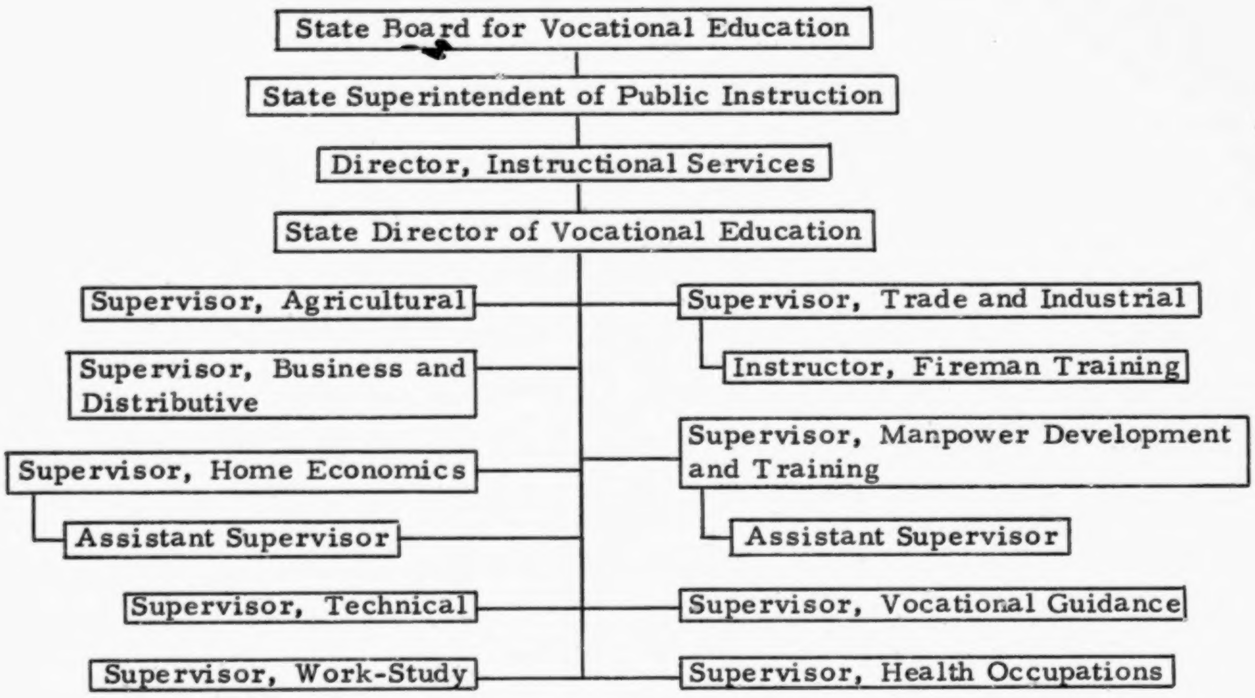
State Board for Vocational Education
State Superintendent of Public Instruction
Director, Instructional Services
State Director of Vocational Education
Supervisor, Agricultural
Supervisor, Business and Distributive
Supervisor, Home Economics
Assistant Supervisor
Supervisor, Technical
Supervisor, Work-Study
Supervisor, Trade and Industrial
Instructor, Fireman Training
Supervisor, Manpower Development and Training
Assistant Supervisor
Supervisor, Vocational Guidance
Supervisor, Health Occupations

Figure 1. Montana's organization at the State level for the administration of vocational-technical education

In the area of vocational-technical education within the Montana State Department of Public Instruction there has been in recent years considerable turnover of professional personnel at the Director level as well as some within vocational agriculture, distributive education, and vocational guidance. The greatest amount of change has occurred in the position of Director of Vocational Education. During the past 10 years five different persons have served as Director of Vocational Education. There have been four different Directors or Acting Directors in the past four years. During the same decade three different persons have served as State Supervisor of Distributive Education, four as State Supervisor of Agricultural Education, and four as State Supervisor of Vocational Guidance. Home economics education and trade and industrial education have had no changes in the head State supervisory positions. The same person has served as State Supervisor of Technical Education since the creation of that position in 1963-64.

Current programs of vocational-technical education at the local level in Montana are provided in (a) a number of comprehensive (regular) high schools, (b) area vocational schools, (c) community or junior colleges, and (d) certain units of the Montana University System.

In connection with the types of institutions designated to provide vocational-technical education programs there was, at the time of the survey, some interest evident in the possible utilization of a large Federal installation (scheduled for abandonment) for some kind of State or multistate use for vocational-technical education. According to the Montana press during the period of the survey herein being reported, the Glasgow Air Force Base was to be phased out as of June 30, 1968 or perhaps later in the year (around September 1). There was much discussion in the newspapers of possible uses of the Base were it to be abandoned by the Defense Department. The many conjectures resulting from the visitations by many different groups to the Base included a number of educational uses, one of which was to use it as a center for vocational-technical education.

The Base is located a bit north of Glasgow and not too far from the Canadian border in the northeastern section of the State. It is reportedly a $100 million installation on a site of 6,837 acres. It has extra heavy duty runways four miles long. The following rather detailed description of the Base's facilities was given by a Montana newspaper:

> The base has more than 140 buildings with 1.5 million square feet of space, over 1,200 family housing units, a 50-bed hospital, schools, theater, library, bowling alley, gymnasium and facilities to accommodate a community of 10,000 persons.[7]

What the State government could do with a giant facility such as this poses a kind of giant question. It could easily become a giant "white elephant" were it to be taken over by the State with its use restricted to vocational-technical education. One has only to ruminate briefly about the maintenance and operating costs of such a mammoth installation to lead him to the white elephant conclusion. Furthermore, it is quite poorly located for use for vocational-technical education.

The concept of the "area" vocational school has been in existence for several years. The Vocational Education Act of 1963 and subsequent Federal and State legislation appear to have given the term a boost. It is reported, however, that the proposed new Federal legislation for vocational education may drop the term completely. At the time of the Montana survey there were two Montana school systems which had been given area designation by the State Board of Education: Helena and Missoula. An additional 11 school systems were at various stages in their efforts to secure area designation: Billings, School District No. 2; Bozeman, School District No. 7; Butte, School District No. 1; Custer County High School and Miles Community College (Miles City); Fergus County High School (Lewistown); Flathead High School, District No. 5; Glendive, School District No. 1; Great Falls High School, District A; Havre High School, District A; Livingston, School District No. 4; and Sidney Public Schools, District No. 1.[8]

The area designation, according to certain school administrators in the State, was being sought primarily for prestigious, financial, or political reasons. Under such a designation the local board and administration remain in charge as regards policy, curriculum, finances, and the like. The designation gives the district the right to count enrollees in ANB (average number belonging) in order to receive reimbursement from the State. There is no actual "area" designated as the service area. There is no enlarged tax or population base. There is no extension of voter or board of trustees control beyond the boundaries of the school district granted the area designation. Thus, the term "area school" appears not to be meeting its connotations and implications as regards enrollments, capital and operational financing, program improvement, policy development, and administrative control.

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[7] Great Falls Tribune. "Glasgow Base Plan Wins OK," October 27, 1967, p. 1.

[8] The list as given in a memorandum, dated October 18, 1967, from Harriet Miller, State Superintendent of Public Instruction, to members of the State Board of Education. As of January 30, 1968, according to Barbara Duffy, Secretary to the State Board of Education, no new applications beyond the 11 shown above had been received by the State Board.

The law in Montana providing permissively for the establishment of junior colleges was enacted in 1939. Two junior colleges were established: Miles Community College in 1939 and Dawson College in 1940.

After nearly three decades their total enrollments have reached 278 and 394, respectively. In the 1967-68 academic year 61 per cent and 81 per cent, respectively, are registered in the college transfer program and only 13 per cent and 9 per cent, respectively, in the vocational-technical program.

The junior college plan having had little impact on the need for vocational-technical education in Montana, the Legislative Assembly in 1965 enacted the Community College Law. One college was established in the fall of 1967 under this permissive act: Flathead Valley Community College. Its 1967-68 enrollment in vocational-technical education was 113, or 18 per cent of its total enrollment of 619.

As far as institutions providing college level courses is concerned, there appears to be a sufficient number of such units in Montana in the form of the six units comprising the Montana University System. In the course of the survey, a number of people lamented to the Survey Staff that Montana has as many as six such institutions. The Survey Staff believes that the junior college or community college plan is NOT the solution in Montana to the problem of improved opportunity for vocational-technical education.

Both of these attempts at creating new types of educational institutions were through permissive legislation. More and more states seem to be reaching the conclusion that educational improvement, organizationwise, can best be achieved through the state's recognizing its basic responsibility for education and mandating school district organization and reorganization. In fact, by 1965 almost 50 per cent of the states had moved to varying degrees of legislatively mandated changes in school district formation. State legislatures in the past have mandated the creation of counties, judicial districts, congressional districts, and other types of districts. What, then, is their logic in hesitating to mandate the creation of various kinds of new school districts? The Federal Constitution, through its "reserved" powers has left education to the states. State constitutions invariably contain a section regarding the state's responsibility for establishing and maintaining a uniform system of public schools. It is high time for Montana, like some other states, to accept more fully its State responsibility and through its elected Legislative Assembly continue, with more long-range and consistent plans, to meet better the educational needs of all youth of the State.

The State Board of Education has provided for a Vocational Advisory Council under the provisions of Federal legislation pertaining to vocational education. This Council of seven members apparently has not fulfilled its potential. At least some of its members so indicated to the Survey Staff. Its relationship to the Board and to the State staff for vocational-technical education seems not to be fully understood or implemented. Such a council can be of immeasurable assistance to a state director of vocational education and his staff and through the director can be helpful to the state governing board in its work on vocational-technical education. Apparently the Advisory Council for Montana wishes to help, but it needs much guidance as to its appropriate functions, with whom and how often it should meet, and other operational aspects.

Montana, like most other states, took advantage of the Vocational Education Act of 1963 and created a Research Coordinating Unit. There apparently has been quite a bit of turnover in the immediate leadership of this unit and some lack of clarification as to its relationship to the State Director of Vocational Education and his staff.

Some Overall Data for Vocational-Technical Education in Montana and 10 Other Western States

Table 3 shows Montana's total enrollments in vocational-technical education for the most recent 10-year period for which data were available. It is only within the last three years that any meaningful growth in total enrollment is evident. The first seven years represent a kind of "doldrums" situation, with some slight gains and some slight losses as quickly evident from the indexes in Table 3.

TABLE 3

MONTANA'S TOTAL ENROLLMENTS IN VOCATIONAL-TECHNICAL EDUCATION
1956-57 THROUGH 1965-66

School year	Enrollment	
	Number	Index
1956-57	10,201	100
1957-58	10,424	102
1958-59	10,580	104
1959-60	9,955	98
1960-61	9,684	95
1961-62	10,199	100
1962-63	10,387	102
1963-64	11,777	115
1964-65	12,430	122
1965-66	14,522	142

Source: U. S. Office of Education, _Digest of Annual Reports of State Boards for Vocational Education._ (Fiscal years 1957 through 1962); U. S. Office of Education, _A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education_ (Fiscal years 1963 and 1964); Office of the Montana Director of Vocational Education (Fiscal years 1965 and 1966).

Comparative enrollment data in vocational-technical education for Montana and the 10 other Western states are portrayed in Table 4 for five different years. The indexes for the five years show that Montana always ranked in the lower one-half of the group of states as regards indexes of enrollment changes compared with the index of enrollment for the base year, 1955-56. The respective index positions for Montana among the 11 states for the four years are 8th, 9th, 8th, and 7th. Arizona (twice) and Nevada (twice) ranked first in indexes of enrollment gains when compared with the base year. Utah reflects the poorest situation as regards gains in index of total enrollment in vocational-technical education.

Table 5 contains data about Montana's expenditures for vocational-technical education over a 10-year period and the percentage of the funds from three different sources. Except for 1959-60, there has been a constant growth in total expenditures for vocational-technical education in Montana; and this one expenditure decrease was by only $2,741. It can be noted that up to the last year the major gain in per cent of support has been from the State (from 13 to 19 per cent). Until the last year the percentage for Federal support remained quite constant for the period - at slightly over one-fourth of the total. In 1965-66, the Federal per cent rose to 40, and the State support fell to 12 per cent. Offsetting the increasing percentage of State support has been a decreasing percentage of local support (from 61 down to 48 per cent).

TABLE 4

TOTAL ENROLLMENTS IN VOCATIONAL-TECHNICAL EDUCATION AMONG THE 11 WESTERN STATES IN 1955-56 AND INDEXES OF SUBSEQUENT ENROLLMENTS BY ALTERNATE YEARS, 1957-58 THROUGH 1963-64

State	1955-56 vocational-technical enrollment	Index* of enrollment			
		1957-58	1959-60	1961-62	1963-64
Arizona	18,629	146	134	164	174
California	311,411	109	132	140	160
Colorado	50,705	109	105	109	108
Idaho	12,181	115	132	128	135
MONTANA	10,231	102	97	100	115
Nevada	5,028	136	148	147	199
New Mexico	8,881	119	134	131	158
Oregon	33,526	98	106	99	101
Utah	30,405	102	94	99	91
Washington	93,047	121	114	131	131
Wyoming	5,655	110	118	125	141
U. S. (total)	3,413,159	106	110	119	134

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Education (Fiscal years 1956 through 1962); U. S. Office of Education, A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* The year 1955-56 is used as the base year (index = 100).

TABLE 5

MONTANA'S TOTAL EXPENDITURES FOR VOCATIONAL-TECHNICAL EDUCATION AND THE PER CENTS DERIVED FROM FEDERAL, STATE, AND LOCAL SOURCES, 1956-57 THROUGH 1965-66

School year	Total		Per cent of total from		
	Amount	Index	Federal	State	Local
1956-57	$ 796,483	100	26	13	61
1957-58	845,262	106	24	14	62
1958-59	859,780	108	25	15	60
1959-60	857,039	108	26	14	60
1960-61	897,498	113	26	16	58
1961-62	906,778	114	26	16	58
1962-63	952,962	120	27	17	56
1963-64	1,033,677	130	26	18	56
1964-65	1,166,840	146	26	19	55
1965-66	2,445,676*	307	40	12	48

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962); U. S. Office of Education, A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964); Office of the Montana Director of Vocational Education (Fiscal years 1965 and 1966).

* Includes $755,000 for construction.

In Table 6 are shown how the total expenditures for vocational-technical education in Montana were divided among three major categories of cost for the most recent 10-year period for which data were available. The total amounts and the years covered are identical with those shown in Table 5 (sources of vocational-technical monies).

Except for the last year expenditures for administration have remained quite constant (and small). The bulk of the money has gone for instruction as it should have. Over the years the cost of supervision and teaching preparation has risen (from 11.1 up to 17.3 per cent). This, moreover, has generally been at the expense of instruction (from 87.2 down to 79.3 per cent).

TABLE 6

TOTAL EXPENDITURES FOR VOCATIONAL-TECHNICAL EDUCATION IN MONTANA AND THE PERCENTAGE DISTRIBUTION AMONG THREE MAJOR CATEGORIES OF COST, 1956-57 THROUGH 1965-66

School year	Total	Per cent of total for		
		Administration	Supervision and teacher training	Instruction
1956-57	$ 796,483	1.7	11.1	87.2
1957-58	845,262	2.1	13.8	84.1
1958-59	859,780	1.7	15.0	83.3
1959-60	857,039	1.2	13.4	85.4
1960-61	897,498	0.9	13.7	85.4
1961-62	906,778	1.2	14.1	84.7
1962-63	952,962	1.2	14.0[a]	84.8[b]
1963-64	1,033,677	1.6	15.3[c]	83.1[d]
1964-65	1,166,840	1.5	15.8[e]	82.7[f]
1965-66	1,690,676[g]	3.4	17.3[h]	79.3[i]

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962); U. S. Office of Education, A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964); and Office of the Montana Director of Vocational Education (Fiscal years 1965 and 1966).

[a] Includes $35,811 for "other allowable items": travel of State personnel, communication, supplies, printing, rental of space, heat, light, and janitor service.

[b] Includes $10,195 for "instructional equipment."

[c] Includes $35,715 for "other allowable items" (see footnote "a" above).

[d] Includes $21,006 for "instructional equipment."

[e] Includes $42,400 for "other allowable items" (see footnote "a" above).

[f] Includes $63,164 for "instructional equipment."

[g] Excludes $755,000 for capital outlay ("construction").

[h] Includes $114,190 for "other allowable items" (see footnote "a" above).

[i] Includes $139,217 for "instructional equipment"; $45,693 for "vocational guidance"; and $2,009 for "work-study."

In Table 7 Montana's increase in total expenditures for vocational-technical education for each of three triennia (three-year periods) is compared with the changes for each of the 10 other Western states. In this regard Montana tends to be in the bottom one-half of the group although in the most recent triennium its position greatly improved; in fact, the increase in State support for the last triennium placed Montana in the top one-half of the group (rank of 4th). Quickly obvious from Table 7 is the phenonenal increase in Federal money in the last triennium. This, in turn, has made the per cents of increase for the "total" quite high in most instances. These high increases reflect, in large measure, the financial impact of the Vocational Education Act of 1963.

Certain Background Information about Montana

In this section of the report certain general information about the State of Montana will be presented to serve as additional background material to provide the reader a better understanding of the setting in which the survey herein being reported was made. Montana will also be compared with the 10 other Western states in regard to certain relevant aspects.

In Table 8 is presented Montana's population growth, by decades, from 1870 through 1960. Except for one decade (1930) in the 90-year period, there have been increases although these have been quite variable. The 1960 data represent the largest increase in both number and per cent since 1930.

While the population for the entire State showed an increase in 1960 of 14.2 per cent over the 1950 population, analysis of population change for the 56 counties reveals wide variation. There were 24 counties which actually had decreases in population during the 10-year period, and only 18 counties increased more than 10 per cent, with the range of population change for counties extending from -18.8 per cent to +50.4 per cent.

The 1960 census revealed that Montana had only nine cities with populations of 10,000 or more. All of these have been increasing since 1940 with the exception of Butte, which has been decreasing since the 1920 census and which showed a 16.2 decennial per cent decrease in population in 1960. Silver Bow County, in which Butte is located, has also been decreasing in recent decades, with the decrease at the 1960 decennial census being 4.1 per cent.

Of the 50 states, Montana is fourth in area, but in 1960 it was 41st in population, with the density in population per square mile being 4.63. This means, obviously, that there is much "wide open space" and that much of the State is rural in nature. Of the 56 counties, 32 were considered 100 per cent rural in 1960 (no population concentrations of 2,500 or more) and eight additional counties were found to be more than 50 per cent rural. Within the total State there were only 26 incorporated areas which had 2,500 or more persons; and these 26 accounted for 46.3 per cent of the total population for the State. In the table below are shown for Montana for the last seven census periods the proportions of the population which lived in urban areas.

Census year	Per cent urban
1900	34.7
1910	35.5
1920	31.3
1930	33.7
1940	37.8
1950	42.8
1960	50.2

TABLE 7

PER CENTS OF INCREASE IN TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION IN THE 11 WESTERN STATES BY TRIENNIA, 1956-57 THROUGH 1965-66

State	Per cent of increase in expenditures											
	1956-57 to 1959-60				1959-60 to 1962-63				1962-63 to 1965-66			
	Local	State	Federal	Total	Local	State	Federal	Total	Local	State	Federal	Total
Arizona	11	26	23	25	26	27	35	34	98	67	501	201
California	48	6	39	44	33	17	47	35	136	7	335	165
Colorado	28	20	30	27	27	41	39	32	101	-6	295	124
Idaho	24	37	32	31	16	27	37	24	85	7	181	78
MONTANA	6	17	8	8	4	33	16	11	118	87	278	156
Nevada	31	126	24	39	71	25	23	49	478	98	120	333
New Mexico	14	93	20	23	26	9	20	22	150	17	407	198
Oregon	8	36	27	18	5	74	18	25	234	218	298	244
Utah	34	-2	31	31	21	83	19	24	233	31	404	245
Washington	36	24	24	32	47	24	59	43	43	131	223	87
Wyoming	13	55	1	13	2	-9	2	--	103	-8	253	128
U. S. (total)	29	22	22	25	28	36	21	29	145	97	340	162

Source: *A Nationwide Study of the Administration of Vocational-Technical Education at the State Level: Analysis of Expenditures for Vocational-Technical Education Programs*, Berkeley, California: School of Education, University of California, August 31, 1967, pp. 246, 247, 250 - 255.

TABLE 8

MONTANA POPULATION, BY DECADES, 1870 THROUGH 1960

Census year	Total population	Increase over preceding census	
		Number	Per cent
1870	20,595	--	--
1880	39,159	18,564	90.1
1890	142,924	103,765	65.0
1900	243,329	100,405	70.3
1910	376,053	132,724	54.5
1920	548,889	172,836	46.0
1930	537,606	-11,283	-2.1
1940	559,456	21,850	4.1
1950	591,024	31,568	5.6
1960	674,767	83,743	14.2

Source: U. S. Census reports.

The data for 1960 show that for the first time slightly more than one-half of the population of Montana live in centers of 2,500 or more persons. It is projected that by 1976, 60 per cent of Montana's population will be urban and over three-fourths of the population of the nation as a whole will be residing in urban centers.[9]

During the 1950-1960 decade only 10 Montana counties experienced more in-migration of population than out-migration. For the State as a whole there were 25,181 more out-migrants than in-migrants, and for the individual counties the migrants ranged from -30.5 to +18.0 per cent of their respective 1960 populations.[10]

According to the Montana Board of Health, the number of births per year in Montana for the years from 1955 through 1967 are as follows.

Year	Number of births	Year	Number of births
1955	17,461	1961	17,197
1956	17,703	1962	16,611
1957	18,219	1963	15,934
1958	17,275	1964	14,858
1959	16,641	1965	13,521
1960	17,266	1966	12,496
		1967	11,887

Since 1960 there have been gradual decreases, with the birth rates in recent years being about the same as those for the nation as a whole.

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[9] Dale E. Roth and William V. Williams, Factors Influencing the Economic Growth Rate of Montana, North Star Research and Development Institute, Minneapolis, 1964, p. 9.

[10] Charles A. Stoerzinger, Current Economic Progress Report for the Upper Midwest, 1964, October, 1965, pp. 96-97.

Available to the Survey Staff were several estimates of population since the 1960 census as well as some projections for the next several years. All of the estimates and projections examined indicated for the State gradually increasing population for the next 10 or 20 years.

In Table 9 is shown for each of the 11 Western states the per cent of population change that has occurred since 1960. It may be seen that, of the 11, only Wyoming has experienced a loss in population; however, Montana has shown the least per cent of increase (3.9) of the remaining 10. Montana's rank in per cent of change in population among all 50 states is 42nd.

TABLE 9

PER CENT OF CHANGE IN TOTAL RESIDENCE POPULATION, APRIL 1, 1960 TO JULY 1, 1967 IN THE 11 WESTERN STATES

State	Per cent of change 1960-1967	Rank among	
		11 states	50 states
Arizona	25.5	2	2
California	21.9	3	3
Colorado	12.6	6	17
Idaho	4.8	9	39
MONTANA	3.9	10	42
Nevada	55.8	1	1
New Mexico	5.5	8	35
Oregon	13.0	5	15
Utah	14.8	4	11
Washington	8.3	7	26
Wyoming	-4.6	11	50
U. S. (average)	10.4	--	--

Source: National Education Association, Research Division, Rankings of the States, 1968, p. 6.

Table 10 provides for the 11 Western states a comparison of the 1967 estimated population with estimates for 1975 and 1985. According to these estimates, Montana will show population increases but at a lower rate for the overall period (1967-1985) than any of the other Western states.

In Table 11 are shown by age groups the population data for the 1950 and 1960 censuses and for the projected 1970 population used in the Montana Tax Study. From the table it may be concluded that 1970 will experience considerably increasing numbers in both the high school age group (14-17) and the post-high and college age group (18-21).

The Research Division of the National Education Association provides information about the proportion of the population which is enrolled in school. Table 12 shows this information for the 11 Western states. Here again, the record for Montana is not very good when compared with either the Western region or with the nation as a whole.

TABLE 10

LATEST POPULATION (1967) AND ESTIMATED POPULATION (1975 AND 1985) FOR THE 11 WESTERN STATES

State	1967	Estimated population		Per cent increase 1967-1985
		1975	1985	
Arizona	1,635,000	2,035,000	2,580,000	58
California	19,165,000	23,225,000	29,000,000	51
Colorado	1,975,000	2,250,000	2,605,000	32
Idaho	700,000	730,000	815,000	16
MONTANA	700,000	735,000	800,000	14
Nevada	445,000	605,000	670,000	51
New Mexico	1,005,000	1,160,000	1,430,000	42
Oregon	2,000,000	2,160,000	2,380,000	19
Utah	1,020,000	1,155,000	1,355,000	33
Washington	3,090,000	3,185,000	3,605,000	17
Wyoming	315,000	340,000	390,000	24

Source: A copyrighted article in U. S. News & World Report, "Where the People Will Be - Preview of U. S. in '70s and '80s," January 29, 1968, pp. 76 and 77.

Table 13 is presented to show the picture of public school enrollments in recent years. The data for the six years covered in the table reveal the following:

1. Elementary, secondary, and total public school enrollments have all been increasing steadily since the 1962-63 school year, with enrollments for the secondary schools showing greater increases than those for the elementary schools.

2. All individual grade groups for the 1967-68 enrollment showed some increase over the 1962-63 school year, with grades 11 and 12 showing the largest increases.

3. The number of ungraded pupils in the public schools increased three-fold, but even by 1967-68 these pupils represented less than 1 per cent of the total public school enrollment.

For the school year 1967-68 there were in Montana 173 public high schools (including senior high schools but exclusive of junior high schools), and the combined enrollment of these schools was 44,558. For the individual schools, enrollment ranged from 13 to 1,971, with the median enrollment being 118 and the average, 258. Of the 173 high schools, there were 137 (or 33 per cent) which had enrollments of fewer than 300, which is the minimum high school size approved by many educational authorities. During the 1962-63 school year 38 per cent of the Montana public high schools had enrollments of less than 300. Thus, some gain in size of high school has been achieved in Montana through recent consolidation.

Computations of the per cents of survival from grade to grade which are possible from the six-year enrollment data show, in general, gradual although small increases over the period, with the greatest increase occurring in grade 10. These increases, though small, would seem to be indicative of improving holding power and of an awareness on the part of young people of the desirability of securing a high school education.

TABLE 11

POPULATION OF THE STATE OF MONTANA FOR 1950 AND 1960 AND PROJECTED POPULATION FOR 1970, BY AGE GROUPS

Age group	1950		1960		Projected 1970		Difference in population	
	No.	Index	No.	Index	No.	Index	1950-1960	1960-1970
Under 5 (Pre-school)	68,201	100	83,102	121	91,748	135	14,901	8,646
5-13 (Elementary school)	91,702	100	129,681	141	146,273	160	37,979	16,592
14-17 (High school)	34,573	100	44,869	130	59,992	174	10,296	15,123
18-21 (Post-high and college)	32,942	100	36,138	110	53,666	163	3,196	17,528
22-64 (Work force)	312,742	100	315,557	101	350,677	112	2,815	35,120
65 and over (Retired)	50,864	100	65,420	129	68,865	123	14,556	3,445
Total	591,024	100	674,767	114	771,221	130	83,743	96,454

Source: U. S. Census reports and William D. Diehl, Montana Tax Study, Part Four: Human Resource Analysis, p. 14.

TABLE 12

PER CENT OF THE 1967 POPULATION 5-17 YEARS OF AGE ENROLLED IN SCHOOL, FALL OF 1967, IN THE 11 WESTERN STATES

State	Per cent	Rank among	
		11 states	50 states
Arizona	85.1	11	31
California	92.4	6	7
Colorado	94.3	5	6
Idaho	88.8	8	13
MONTANA	85.5	10	30
Nevada	97.0	1	2
New Mexico	88.5	9	15
Oregon	89.8	7	8
Utah	95.1	3	4
Washington	95.0	4	5
Wyoming	95.9	2	3
U. S. (average)	85.9	--	--

Source: National Education Association, Research Division, Rankings of the States, 1968, p. 13.

Information concerning the number of young people graduating from the public high schools of Montana during the last five years is presented in Table 14. Comparison for each of the six years of the number graduating with the respective number enrolled in grade 12 shows the ratios to be between 93 and 95 per cent. It may be seen also that even though there is slight improvement in the size of classes graduating from Montana's high schools, a sizable proportion (40 per cent) of the most recent graduates were from groups considered by Dr. James B. Conant as too small to provide adequate educational opportunities.

The Research Division of the National Education Association analyzes the number of high school graduates in the 50 states in terms of the number of pupils enrolled in grade 9 four years earlier. This information for the 1966-67 graduates in the 11 Western states is shown in Table 15. Montana stands fourth among the Western states and 12th in the nation. These data also indicate an encouraging holding power rate for the public secondary schools of the State.

In addition to the public schools of the State there are 20 State-accredited secondary schools which are not operated by public school districts (17 private and three State and Federally operated). During each of the past six school years, the combined enrollment of these schools has been between 4,046 and 4,504, with 4,270 being the 1967-68 figure. The total number of graduates from these special high schools for the last school year (1966-67) was 1,050. Both the 1967-68 enrollments of these special schools and the number of their 1966-67 graduates are approximately 10 per cent of the corresponding datum for the public high schools.

According to data shown in Table 16, Montana is near the midpoint of not only the 11 Western states but also of the entire 50 states in terms of the per cents of increase in high school graduates.

TABLE 13

ENROLLMENTS* IN MONTANA'S PUBLIC SCHOOLS, 1962-63 THROUGH 1967-68

Grade	1962 enrollment	Index based on 1962 enrollment					1967 enrollment
		1963	1964	1965	1966	1967	
Elementary							
Kindergarten	3,201	107	107	114	110	114	3,656
One	15,482	104	102	104	102	103	15,904
Two	14,608	101	104	102	103	103	15,010
Three	14,228	101	102	104	101	104	14,839
Four	14,074	100	100	102	104	102	14,335
Five	13,599	102	103	100	103	107	14,557
Six	12,854	104	106	108	107	109	13,973
Seven	13,038	100	105	105	107	108	14,068
Eight	12,791	97	102	104	106	108	13,798
Total elementary	113,875	101	103	104	104	106	120,140
Secondary							
Nine	13,085	96	97	99	104	105	13,703
Ten	12,098	99	101	101	103	109	13,203
Eleven	9,596	117	118	121	122	125	12,027
Twelve	7,912	112	133	134	137	141	11,122
Total secondary	42,691	105	109	111	114	117	50,055
Ungraded**	433	89	191	167	190	338	1,462
Total enrollment***	156,999	102	105	106	107	109	171,657

Source: Records of the State Department of Public Instruction.

* As of October 1 each school year.

** Includes both elementary and secondary.

*** Not included are a few postgraduates; the number of these was small (1-7) except for 1967-68 when 149 were reported.

TABLE 14

MONTANA PUBLIC HIGH SCHOOLS AND THE NUMBER OF THEIR GRADUATES DURING THE LAST FIVE SCHOOL YEARS, 1962-63 THROUGH 1966-67

Item	1962-63	1963-64	1964-65	1965-66	1966-67
Number of high schools	170	170	171	172	172
Total graduates during school year	7,393	8,335	9,941	9,992	10,273
Graduating class of individual high schools:					
Range in size of group	0-558	1-631	3-786	4-538	2-541
Median	19	21	25	26	26
Average	43	49	58	58	60
No. of schools having fewer than 100 in graduating class	154	153	146	149	147
Per cent of year's high school graduates from classes of fewer than 100	49%	47%	37%	42%	40%

Source: High school principals' annual reports, filed in the offices of the State Department of Public Instruction.

TABLE 15

PUBLIC HIGH SCHOOL GRADUATES IN 1966-67 AS PER CENTS OF NINTH GRADE PUPILS IN THE FALL OF 1963 AMONG THE 11 WESTERN STATES

State	Per cent	Rank among	
		11 states	50 states
Arizona	72.8	11	38
California	89.5	1	2
Colorado	80.5	7	20
Idaho	81.4	6	17
MONTANA	83.8	4	12
Nevada	77.6	8	26
New Mexico	73.2	10	36
Oregon	82.0	5	15
Utah	85.2	3	10
Washington	86.1	2	8
Wyoming	75.7	9	33
U. S. (average)	77.8	--	--

Source: National Education Association, Research Division, Rankings of the States, 1968, p. 28.

TABLE 16

PER CENTS OF INCREASE OF HIGH SCHOOL GRADUATES AMONG THE 11 WESTERN STATES, 1961-62 TO 1966-67

State	Per cent	Rank among	
		11 states	50 states
Arizona	47.3	5	15
California	52.3	4	11
Colorado	53.3	3	8
Idaho	29.9	11	44
MONTANA	41.5	6	26
Nevada	88.9	1	1
New Mexico	58.8	2	3
Oregon	35.5	8	39
Utah	32.6	9	42
Washington	37.7	7	31
Wyoming	32.3	10	43
U. S. (average)	42.8	--	--

Source: National Education Association, Research Division, Rankings of the States, 1968, p. 28.

The institutions of higher learning, both public and private, and other schools in the State offering post-secondary programs were contacted by Max L. Amberson to determine how many of the 1966-67 graduates from Montana's high schools, both public and private, had enrolled in the autumn of 1967 for further education in schools within the State. Following is a summary of the results of his investigation.

Type of school or program	Number of 1966-67 graduates enrolled
Higher education institutions	
Montana University system	4,533
Public community and junior colleges	343
Private colleges	537
Total	5,413
Other post-secondary programs	
Public high schools	171
Schools of cosmetology	233
Business colleges	702
Miscellaneous programs	123
Total	1,229

While more than four times as many of these recent graduates enrolled in collegiate programs as enrolled in other types of post-high school programs, together they represent almost 60 per cent of the total graduating group. Undoubtedly there were, in addition to these, some who enrolled in schools outside the State. It would seem that young people in Montana have "got the message that education pays." In considering the larger proportion of these 1967 graduates who were attending college institutions compared with those enrolled in other types of post-high school programs, it must be recognized that Montana has a considerable number (for the size of population) of institutions of the collegiate type, and that, while there are quite a number of private schools for specialized training (e.g., business, nursing, cosmetology), there are almost no opportunities for less-than-college programs in public institutions. If there were available State schools which would provide high school graduates with comprehensive post-secondary educational opportunities, it is likely that not only would the proportion of enrollments in college programs to enrollments in post-secondary programs have been quite different, but also that even more of the recent graduates might have been attending school the autumn after their graduation from high school.

In Table 17 is presented information concerning the labor force for the last three census periods and for the projected 1970 population. While the total labor force shows an increase

TABLE 17

THE NUMBER OF PERSONS IN MONTANA'S LABOR FORCE BY AGE GROUP FOR 1940, 1950, AND 1960, AND FOR THE PROJECTED 1970 CENSUS

Age group	1940		1950		1960		Projected 1970	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
14-17	3,974	2	7,685	3	12,985	5	18,195	6
18-24	41,430	18	33,020	14	33,826	13	53,944	18
25-34	53,934	24	52,760	23	50,424	20	57,957	20
35-44	41,579	18	51,360	22	58,357	23	54,140	18
45-64	73,472	33	69,825	31	84,091	33	95,806	33
65 and over	10,605	5	14,875	7	14,718	6	15,433	5
Total	224,994	100	229,525	100	254,401	100	295,475	100

Source: U. S. Census reports and William D. Diehl, Montana Tax Study, Part Four: Human Resource Analysis, p. 35.

for each decennial year to the next, this is not the case for any of the six age groups included except for the youngest group (14-17). Comparison of the total labor force for any of the four years included in the table with its respective total population shows that the labor force comprises between 38 and 40 per cent of the total population. The major components of the population who are not in the labor force are children, retired persons, full-time students, and a majority of the women of the State.

In Table 18 are shown, by sex and age, the population and labor force participation rates for the last three census periods. From these data the following changes may be noted for the population aged 14 and over:

1. The female population increased gradually and was more nearly equal in number to the male population in 1960 than in either of the two previous decades.

2. A slightly smaller proportion of the male population were in the labor force in 1960 than in either 1950 or 1940.

3. The proportion of women in the labor force has increased considerably from 1940 to 1960, when approximately one-third of the female population were in the labor force.

4. Both the total population and the labor force participation showed increases for 1950 over 1940 and for 1960 over 1950; these changes were the result of increases in female population and increases in their labor force participation.

5. The data show steadily increasing participation of women in the labor force at all age levels.

6. For each census, more than one-half of the population who are 14 years of age or older are in the labor force.

The level of education is an important factor in an analysis of the labor force. In Table 19 is shown a summary for three census periods of the educational level of the adult population of Montana. Comparison for the three periods of the proportions of the adult population in each education class shows a consistent gain in the educational level of the adult population of the State. In 1940, there were only 29.3 per cent who had a high school or better education; in 1950, it had risen to 40.0 per cent; and by 1960, 47.8 per cent (or almost one-half) had achieved this level. Moreover, by 1960 almost one-fifth of the adult population had some educational training beyond high school.

In Table 20, from the Montana Tax Study and based on a U. S. Department of Labor report, are presented data which picture the growth in educational attainment of the employed persons in the United States at five points in a 14-year period. All occupational groups show gains over the entire period, and "farm laborers" is the only group that shows any regression during the period. For all occupations combined, the median years of schooling increased 1.5 years during the years shown in the table. The typical professional and managerial worker has one and one-half years of education beyond high school; the typical laborer had gone slightly beyond grade 8.

According to census data for Montana, its unemployment rate (total unemployed divided by the total civilian work force) in 1940 was 17.6, but by 1950 the rate had declined to 5.1, and in 1960 it was 6.8. The Unemployment Compensation Commission of Montana reported decreased rates for 1962, 1963, and 1964 (5.1, 4.8, and 4.6, respectively).[11]

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[11] William D. Diehl, Montana Tax Study, Part Four: Human Resource Analysis, p. 23.

TABLE 18

POPULATION AND LABOR FORCE PARTICIPATION RATES BY SEX AND AGE, 1940, 1950, AND 1960

Year	Age group	Male		Female		Total for State	
		Population	Per cent in labor force	Population	Per cent in labor force	Population	Per cent in labor force
1960	14-17	23,390	33.5	21,799	23.6	45,189	28.7
	18-24	28,229	80.1	28,893	38.8	57,122	59.2
	25-34	40,680	95.6	39,867	28.9	80,547	62.6
	35-44	43,262	96.8	42,546	38.8	85,808	68.0
	45-64	65,214	90.5	60,744	41.3	125,958	66.8
	65 yrs and over	32,725	33.1	31,049	12.5	63,774	23.0
	Total	233,500	77.5	224,898	32.6	458,398	55.5
1950	14-17	17,095	30.4	16,220	15.3	33,315	23.1
	18-24	28,885	79.7	27,620	36.2	56,505	58.4
	25-34	45,250	93.3	43,685	24.2	88,935	59.3
	35-44	41,800	95.5	38,465	29.7	80,265	64.0
	45-64	61,920	88.8	54,560	27.2	116,480	60.0
	65 yrs and over	27,410	46.3	22,620	9.7	50,030	30.0
	Total	222,360	80.1	203,170	25.3	425,530	53.9
1940	14-17	20,485	14.8	19,447	4.8	39,932	10.0
	18-24	37,065	78.6	35,277	34.8	72,342	57.3
	25-34	46,721	96.0	41,459	21.9	88,180	61.2
	35-44	36,772	95.9	32,405	19.5	69,177	60.1
	45-64	69,865	91.9	51,668	17.9	121,533	60.5
	65 yrs and over	20,969	45.4	15,288	7.0	36,257	29.2
	Total	231,877	80.2	195,544	19.9	427,421	52.6

Source: U. S. Census reports.

TABLE 19

THE NUMBER OF PERSONS IN MONTANA 25 YEARS OLD AND OLDER IN EACH EDUCATION CLASS, 1940, 1950, AND 1960

Education class*	1940		1950		1960	
	Number	Per cent	Number	Per cent	Number	Per cent
None	4,960	1.6	4,220	1.3	3,301	0.9
1-4	18,510	5.9	16,940	5.2	11,333	3.2
5 and 6	25,093	8.1	20,685	6.3	15,728	4.4
7	----	--	19,295	5.9	17,130	4.8
8	125,533	40.2	84,155	25.7	76,823	21.6
9-12	46,626	14.9	51,085	15.6	61,465	17.3
12	49,434	15.8	74,485	22.8	99,998	28.1
13-15	27,176	8.7	35,865	11.0	43,458	12.2
16+	15,074	4.8	20,465	6.2	26,851	7.5
Total	312,406	100.0	327,195	100.0	356,087	100.0

Source: U. S. Census reports.

* Grade level or grade-group.

TABLE 20

EDUCATIONAL ATTAINMENT OF EMPLOYED CIVILIAN LABOR FORCE OF THE UNITED STATES FOR FIVE YEARS IN THE PERIOD FROM 1948 TO 1962

Occupational group	Median years of schooling				
	1948	1952	1957	1959	1962
Professional and managerial	12.6	12.8	12.9	13.2	13.5
Clerical and sales	12.4	12.4	12.4	12.5	12.5
Craftsmen, foreman, and kindred	9.7	10.1	10.5	11.0	11.2
Operatives and kindred	9.1	9.1	9.5	9.9	10.1
Household	--	8.1	8.3	8.4	8.7
Service	--	9.2	9.6	10.3	10.8
Non-farm laborers	8.0	8.3	8.5	8.6	8.9
Farmers and farm managers	8.2	8.5	8.6	8.7	8.8
Farm laborers	7.6	7.5	8.2	8.3	8.5
All occupations	10.6	10.9	11.7	12.0	12.1

Source: William D. Diehl, Montana Tax Study, Part Four: Human Resource Analysis, p. 31.

Information concerning the number of persons in Montana employed in each industrial group is presented in Table 21. From these data one may see that both agricultural employment and mining employment in Montana have decreased considerably since 1940. Services and retail trade have experienced the greatest increase in number of persons employed.

The following conclusions about employment in Montana since the 1960 census are made on the basis of information presented in a recently published study of economic growth of the six upper midwest states prepared for the Upper Midwest Research and Development Council.[12]

TABLE 21

NUMBER OF PERSONS IN MONTANA EMPLOYED IN EACH INDUSTRIAL GROUP, 1940, 1950, AND 1960

Industry	1940		1950		1960	
	Number	Per cent	Number	Per cent	Number	Per cent
Agriculture, forestry, and fisheries	59, 778	32.3	54, 913	25.2	40, 844	17.7
Mining	13, 526	7.3	9, 301	4.2	6, 782	2.9
Construction	8, 838	4.7	14, 772	6.8	14, 911	6.5
Manufacturing	13, 747	7.4	18, 490	8.5	23, 439	10.1
Transportation and utilities	14, 883	8.0	22, 503	10.3	21, 013	9.1
Wholesale trade	4, 253	2.3	6, 250	2.8	7, 465	3.2
Retail trade	25, 062	13.5	35, 325	16.2	39, 629	17.1
Finance, insurance, and real estate	3, 530	1.9	5, 006	2.3	8, 035	3.5
Services	24, 043	13.0	29, 732	13.6	38, 985	16.9
Government	15, 529	8.3	18, 254	8.4	25, 056	10.8
Not reported	2, 375	1.3	3, 634	1.7	5, 111	2.2
Total	185, 564	100.0	218, 180	100.0	231, 270	100.00

Source: U. S. Census reports.

1. Total employment is growing and will continue to grow, but at rates considerably below the national averages.
2. Agriculture employment will continue to decline.
3. Oil and gas production has experienced both expansion and contraction from 1950 to 1965; a small increase in this area is expected by 1975.
4. Eighty per cent of Montana's total manufacturing employment are engaged in the processing of agricultural, forest, and mineral products. This tie to natural

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[12] James M. Henderson and Anne O. Krueger, Economic Growth and Adjustment in the Upper Midwest: 1960-1975, January, 1967, pp. 41-45.

resource industries means that manufacturing is less important in Montana than in the nation as a whole, with the 1965 manufacturing employment in Montana accounting for 9.8 per cent of the State's total employment, contrasted with 25 per cent for the nation.

5. Railroad employment showed the largest employment decline in the State except for agriculture. While employment in this segment of the economy is declining throughout the nation, railroads are considerably above average in their importance in Montana's total employment picture. Employment in the remaining kinds of transportation in the State and employment in the utilities are expected to increase slightly during the period from 1965 to 1975.

6. Montana is sharing in a nationwide expansion of service-industry employment but at lesser rates than corresponding national rates. The same trends are expected to continue for the 10-year period included in the study.

7. Construction employment in Montana has experienced both acceleration and deceleration since 1960, due chiefly to Federal military and reclamation projects.

8. Both Federal government employment and State and local government employment have increased considerably; continued increases are expected for both types of employment.

In Table 22 is shown for the 1960 employed persons in Montana the type of occupation. In only three categories of occupation (clerical and kindred, private household workers, and service workers) are more women than men employed. For the total employed persons, there are several types of occupation in which approximately one-tenth of Montana's workers are engaged.

Most recent information concerning employment in Montana was secured from the study by Henderson and Krueger. Table 23 shows their summary of the number of persons in Montana engaged in 1965 in the major types of employment and indicates the changes over the 1960 employment. Agriculture showed the greatest loss in employment although it continues to be one of the major sectors of employment in the State. The greatest gain in employment during the five-year period was in State and local government, and this accounts for more than one-half of the total employment increase.

Table 24 shows the 1965 employment expressed in per cents and also indicates the average yearly per cent of change for the 10-year period (1950-1960) and for the five-year period (1960-1965). Comparison of the rates of change shows that the same three sectors of employment (agriculture; mining and oil; and transportation, communication, and utilities) experienced losses during both periods, but the average yearly rates for all three were less for the more recent period. Both Federal government and combined State and local government show greatest rates of increase for the more recent period, with the earlier period having highest rates of increase for State and local government employment and for finance, insurance, and real estate. Service and miscellaneous employment is one of the four major types of employment in Montana, and it experienced the greatest rate of increase during the 1950-60 period. Retail trade, employing the largest proportion of the population, has had small but increasing gains.

Table 25 looks ahead to 1975, and from it one can see that the mining and oil sector is expected to show a slight increase in place of the losses in recent years. Agriculture is predicted to continue to decline, but by 1975 more persons will continue to be employed in agricultural occupations than in manufacturing. Government is expected to be the largest employer and to show the greatest rate of increase for the 10 years covered by the predictions. The service and trade industries will involve the next largest proportions of the employed populations of Montana.

TABLE 22

OCCUPATION OF MONTANA'S EMPLOYED PERSONS, BY SEX, 1960

Occupational group	Men		Women		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Professional, technical and kindred workers	14,706	9.0	11,221	16.5	25,927	11.2
Farmers and farm managers	24,421	15.0	838	1.2	25,259	10.9
Managers, officials and proprietors, except farmers	19,400	11.9	3,782	5.6	23,182	10.0
Clerical and kindred	8,171	5.0	18,895	27.8	27,066	11.7
Sales workers	9,085	5.6	6,066	8.9	15,151	6.5
Craftsmen, foreman and kindred workers	27,925	17.1	489	.7	28,414	12.3
Operatives and kindred workers	24,038	14.7	2,840	4.2	26,878	11.6
Private household workers	210	*	5,082	7.4	5,292	2.3
Service workers except private household	8,969	5.5	14,622	21.5	23,591	10.2
Farm laborers and farm foremen	11,401	7.0	1,013	1.5	12,414	5.4
Laborers except farm and mine	11,038	6.8	208	.3	11,246	4.9
Occupation not reported	3,843	2.4	3,007	4.4	6,850	3.0
Total	163,207	100.0	68,063	100.0	231,270	100.0

Source: U. S. Census reports.

* Less than 0.5 per cent.

TABLE 23

EMPLOYMENT IN MONTANA IN 1965 AND THE CHANGE IN EMPLOYMENT FROM 1960 TO 1965

Employment	Employment in 1965	Employment change from 1960 to 1965
Mining and oil	7,638	-24
Manufacturing	23,723	1,798
Transportation, communication, and utilities	18,453	-1,402
Wholesale trade	9,769	96
Retail trade	43,262	1,844
Finance, insurance, and real estate	8,554	193
Service and miscellaneous	34,814	2,134
Construction	15,762	1,073
Federal government	11,758	2,058
State and local government	34,496	5,596
Agriculture	35,200	-3,800
Total	243,429	9,566

Source: James M. Henderson and Anne O. Krueger, *Economic Growth and Adjustment in the Upper Midwest: 1960-1975*, January, 1967, p. 10.
(Based upon data obtained from State Employment Security Agencies.)

TABLE 24

EMPLOYMENT DISTRIBUTION FOR MONTANA IN 1965 AND RATES OF EMPLOYMENT CHANGE FOR 1950-1960 AND 1960-1965

Employment	1965 per cent of total employment	Rates of employment change	
		1960 to 1965 (Average % per year)	1950 to 1960 (Average % per year)
Mining and oil	3.1	-.06	-3.75
Manufacturing	9.7	1.58	.90
Transportation, communication, and utilities	7.6	-1.46	-1.53
Wholesale trade	4.0	.20	1.90
Retail trade	17.8	.87	.60
Finance, insurance, and real estate	3.5	.46	4.73
Service and miscellaneous	14.3	1.27	2.21
Construction	6.5	1.41	.79
Federal government	4.8	3.85	1.56
State and local government	14.2	3.54	3.68
Agriculture	14.5	-2.05	-3.14
Total employment	100.0	.80	.25

Source: James M. Henderson and Anne O. Krueger, *Economic Growth and Adjustment in the Upper Midwest: 1960-1975*, January, 1967, pp. 12-14.
(Based on studies of the Upper Midwest and *Economic Report of the President*, 1965 and 1966.)

TABLE 25

EMPLOYMENT PROJECTIONS FOR MONTANA FOR 1975, THE CHANGE IN EMPLOYMENT FROM 1965 TO 1975, AND RATE OF EMPLOYMENT CHANGE

Employment	Projected employment for 1975	Change in employment from 1965 to 1975	
		Number	Rate of change *
Mining and oil	7,702	64	.08
Manufacturing	25,041	1,318	.54
Transportation, communication, and utilities	17,160	-1,293	-.72
Wholesale and retail trade	58,752	5,721	1.02
Finance, insurance, and real estate	9,553	999	1.10
Service and miscellaneous	40,000	5,186	1.39
Construction	17,335	1,573	.95
Federal, State, and local government	60,352	14,098	2.66
Agriculture	27,400	-7,800	-2.51
Total employment	263,295	19,866	.78

Source: James M. Henderson and Anne O. Krueger, Economic Growth and Adjustment in the Upper Midwest: 1960-1975, January, 1967, pp. 30 and 32.

* Average per cents per year.

In Table 26 are shown for 10 recent years the contributions of five major sources of income for the State. All of the five sectors of the economy have experienced both increases and decreases during the 10-year period, but each of them was somewhat greater for the most recent year shown (1965) than for 1956, the earliest year in Table 26.

In Table 27 can be seen the amount of income derived in Montana for two recent years from wholesale sales, retail sales, and selected services. During the five years between these two years shown in the table, all three show substantial increases.

Analysis of the kinds of business included in the wholesale trade in 1963 shows that the following six kinds of business, listed in descending order in terms of amount of sales, provided 89 per cent of the total number of establishments included and 80 per cent of the total wholesale sales reported in Table 27.

Farm products, raw materials
Groceries and related products
Petroleum bulk stations
Machinery, equipment and supplies
Motor vehicles, automotive equipment
Lumber, construction materials

Analysis of the kinds of business included in the retail trade for 1963 shows that the following six kinds of business, listed in descending order in terms of amount of sales, provided 72 per cent of the total number of establishments included and 80 per cent of the total retail sales reported in Table 27.

Food stores
Automotive dealers
Lumber, building materials, hardware, and farm equipment dealers
Eating and drinking places
General merchandise group stores
Gasoline service stores

Analysis of the kinds of business in the 1963 selected services shows that the following two categories covered slightly over one-half of the total number of establishments included and of the total volume of business for the services covered in Table 27.

Hotels, motels, tourist courts and camps
Personal services (laundries, cleaning plants, beauty shops, barber shops, etc.)

TABLE 26

MONTANA'S MAJOR SOURCES OF INCOME, 1956 THROUGH 1965
(Amounts in thousands)

Year	Agriculture	Mining	Lumber	Manufacturing	Contract construction
1956	$425,012	$213,781	$ 81,001	$257,016	$213,965
1957	411,363	191,750	61,281	202,479	139,069
1958	450,361	176,728	70,703	191,245	161,864
1959	441,255	167,328	86,043	217,985	134,113
1960	422,986	178,854	80,072	205,629	133,438
1961	379,318	183,344	79,942	212,621	194,616
1962	433,326	190,657	89,457	229,148	192,543
1963	445,435	182,018	95,076	236,230	153,962
1964	422,777	211,435	88,911	272,000	184,655
1965	471,558	228,159	102,590	*	218,572

Source: Montana's Department of Planning and Economic Development, Montana Statistical Review, p. 22.

* Not available.

TABLE 27

TRADE AND SERVICES IN MONTANA, 1958 AND 1963

Item	1958 (Amount in thousands)	1963	
		Amount in thousands	Number of establishments
Wholesale sales	$762,943	$844,249	1,590
Retail sales	862,577	965,734	7,797
Selected services	81,958	100,358	4,365

Source: Montana's Department of Planning and Economic Development, Montana Statistical Review, pp. 7-11.

An analysis of the 1963 census of manufacturers in Montana showed that the industries involving (a) food and kindred products and (b) lumber and wood products were of major importance since they covered more than one-half of each of the four factors reported - number of establishments, number of employees, payroll, and value added by manufacturing.[13]

Information secured from the State Board of Equilization shows the following regarding the total valuation for the State.[14]

Item	Amount
1965 assessed value	$2,681,326,842
1966 assessed value	2,781,661,705
1965 taxable value	785,065,495
1966 taxable value	824,478,912

In each year, the taxable value is approximately 30 per cent of the assessed value. For each of the two years shown, real estate and improvements provided almost one-half of the total taxable value; personal property, other than livestock, provided slightly over one-fifth of the total taxable value.

Where the Montana "1966 Tax Dollar" came from and where it went are presently graphically in the Montana Statistical Review.[15] Following are the data shown for each.

Where the 1966 tax dollar came from	Per cent of total
Property	59.19
Motor fuel	11.13
Individual income tax	10.27
Business and corporation license	5.49
Corporation income tax	3.39
Cigarette tax	3.00
Alcoholic beverages	2.71
Natural resources	2.04
Miscellaneous	2.78
Total	100.00

Where the 1966 tax dollar went	
Elementary and high schools	42.18
Universities	10.26
Counties	14.09
Highways	13.40
Cities	8.99
Health and welfare	2.42
Other State uses	8.66
Total	100.00

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[13] Montana's Department of Planning and Economic Development, Montana Statistical Review, p. 30.

[14] Montana's Department of Planning and Economic Development, Montana Statistical Review, p. 44.

[15] Ibid., p. 47.

Questionnaires Used in the Survey

As indicated earlier, several questionnaires and opinionnaires were developed by the Survey Staff for use in the Montana survey. These instruments were sent by mail (along with business-reply, postage-paid envelopes) to the persons in the group for which each questionnaire had been designed. In the case of the 12 questionnaires used with professional personnel in the State, every person in each group was mailed a copy of the appropriate questionnaire. The timing for the survey required almost immediate preparation and distribution of the questionnaire forms to be used in order to obtain the completed questionnaires in time to be processed and the results to be used by the Survey Staff in their preparation of the survey report. Thus, the mailing in two or three instances was made to the 1966-67 list of teachers with additional copies sent as the 1967-68 lists of educational personnel in the State became available.

Table 28 has been prepared to show the number of questionnaires sent to persons in certain educational positions in Montana and the number returned by them. From the data one may see that the per cent return for the 12 questionnaire forms ranged from 54 to 100. In general, administrators and vocational teachers tended to answer in larger proportions than did the nonvocational teachers (in home economics and business education).

Table 29 contains similar information for the six questionnaires prepared and mailed to persons in appropriate lay groups. Names and addresses of representative "key" homemakers and of some nursing homes were provided by local home economics teachers to the Survey Staff member who served in the area of home economics. Additional nursing homes were secured from the "yellow pages" of the telephone directories for the State.

The mailing list for business firms came from three sources: (a) all banking institutions listed in a June 30, 1967 report, (b) the members of the Board of Directors of the Montana Retail Association, and (c) additional members of the Retail Association selected chiefly on the basis of the type of merchandise sold.

The mailing list for the questionnaire developed for manufacturers was secured from the almost 1,400 manufacturing companies listed in the 1967-68 Montana Directory of Manufacturers and Buyers Guide. The companies to receive questionnaires were selected on the basis of number of employees and type of product.

A questionnaire form which included four open-ended questions dealing with vocational-technical education in Montana, in addition to the request to indicate their opinions about the need for programs of preparation for kinds of workers in a rather comprehensive list, was sent to (a) an officer in each of the local Chambers of Commerce in the State, (b) a representative for each of the trade associations in the State, (c) the members of the State Vocational Advisory Council, (d) the members of the Legislative Council, and (e) the members of the State Board of Education.

The sixth lay questionnaire form to be developed was sent to selected personnel in the Montana State Employment Service and to the managers of all local employment offices in the State.

The per cents of return for the six questionnaires and for the several lay groups contacted, shown in Table 29, range from 23 to 90.

Since Montana covers such a large expanse and has so much variety in terrain, the Survey Office divided the State into five areas (Eastern, Northcentral, Southcentral, Southwestern, and Northwestern)[16] and kept the records of questionnaires sent and returned on this

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[16] These areas do not coincide exactly with the five areas recommended in Chapter 8.

TABLE 28

SUMMARY OF THE NUMBER OF QUESTIONNAIRES SENT TO AND RETURNED BY PERSONS IN SELECTED PROFESSIONAL GROUPS IN MONTANA

Group contacted by questionnaire	Number of questionnaires		Per cent return
	Sent	Returned	
1. Superintendents of schools			
(a) County	56	38	68
(b) District superintendents in charge of secondary schools	158	136	86
(c) District superintendents with only elementary schools	18	16	89
Total superintendents	232	190	82
2. Principals of secondary schools			
(a) Principals who are also district superintendents	87	60	69
(b) Principals of remaining high schools	86	66	77
(c) Principals of junior high schools	22	19	86
Total secondary school principals	195	145	74
3. Counselors	263	195	74
4. Directors (or Coordinators) of vocational education	9	8	89
5. Home economics teachers			
(a) Vocational	81	51	63
(b) Nonvocational	118	67	57
Total home economics teachers	199	118	59
6. Business education teachers			
(a) Vocational: Distributive and office education	54	47	87
(b) Nonvocational	281	135	48
Total business education teachers	335	182	54
7. Other vocational teachers: Agriculture	61	51	84
8. Trade and industrial	59	43	73
9. Practical nurse	7	5	71
10. Technical	45	33	73
11. Principals of high schools with business departments	168	125	74
12. Junior and community colleges	3	3	100

Source: Survey Office records.

TABLE 29

SUMMARY OF THE NUMBER OF QUESTIONNAIRES SENT TO AND RETURNED BY PERSONS IN SELECTED LAY GROUPS IN MONTANA

Group contacted by questionnaire	Number of questionnaires		Per cent return
	Sent*	Returned	
1. Nursing homes	52	22	42
2. Key homemakers	172	89	52
3. Business firms			
(a) Montana State Banks and Trust Companies, National Banks, and Building and Loan Associations	263	72	27
(b) Montana Retail Association	141	80	57
Total business firms	404	152	38
4. Manufacturers			
(a) Food products	113	44	39
(b) Lumber and wood products	127	38	30
(c) Paper and printing	33	14	42
(d) Chemical and petroleum	24	12	50
(e) Stone, clay, and glass	38	11	29
(f) Metal and machinery	52	22	42
(g) Miscellaneous	32	10	31
Total manufacturers	419	151	36
5. Special Montana Groups			
(a) Chambers of Commerce	75	17	23
(b) Trade Association	46	13	28
(c) State Vocational Advisory Council	7	5	71
(d) Legislative Council	13	3	23
(e) State Board of Education	11	8	73
Total special groups	152	46	30
6. State Employment Service	31	28	90

Source: Survey Office records.

* A total of seven additional questionnaires had been mailed but were returned unopened and marked "not deliverable."

basis as well as for the State as a whole. Table 30 was prepared to show the questionnaire returns by section of the State as well as by type of group contacted. Obviously the geographic locations of the professional persons receiving questionnaires was determined by the position held, and for the questionnaires sent to samples of some lay groups in the State, no attempt was made to select in terms of location in the State. With these two facts in mind, it is interesting to observe the comparative sizes of the subgroups receiving questionnaires in the five sections of the State for both the questionnaires to professional personnel and the questionnaires to lay personnel. The per cents of return for the professional subgroups range from 69 to 71 and for the lay subgroups, from 36 to 44. The return for the professional personnel is considerably greater than for the lay personnel, but this is understandable and, in fact, expected. For example, in another statewide survey of vocational-technical education, the percentage of return for the educators contacted by questionnaire was 70, but for the lay groups was 39, or almost identical to the overall per cents shown in Table 30 for Montana.

TABLE 30

SUMMARY OF QUESTIONNAIRES SENT TO AND RETURNED BY PROFESSIONAL AND LAY PERSONNEL IN MONTANA, AND THE PER CENT OF RETURN

Section of the State	Professional personnel			Lay personnel			Total		
	Sent	Returned	%	Sent	Returned	%	Sent	Returned	%
Eastern	344	239	69	222	88	40	566	327	58
Northcentral	336	231	69	192	76	40	528	307	58
Southcentral	347	248	71	215	86	40	562	334	60
Southwestern	260	178	68	281	124	44	541	302	59
Northwestern	289	202	70	320	114	36	609	316	52
Total	1,576	1,098	70	1,230	488	40	2,806	1,586	57

Source: Survey Office records.

Data secured from these 18 survey questionnaires will be reported wherever relevant in subsequent chapters of the survey report. In addition, certain information of a general nature secured from the returned questionnaires will be presented in this chapter. It should be pointed out, moreover, that the Survey Staff considers the function of the questionnaire in a survey to be more than fact finding and opinion gathering, important as these functions are. In some situations a questionnaire form might serve well the purposes of inservice development and motivation; in other cases, a questionnaire could contribute greatly to the public relations aspect of a situation. In this connection, it should be pointed out that each of the public secondary schools in Montana had at least two contacts by questionnaire (superintendent and principal) during the course of the survey, and to all but the very small high schools there were also sent questionnaires to counselors, business education teachers, and home economics teachers even if the school had no vocational education program(s).

The following statements represent the opinions of the majority of the school superintendents and secondary school principals of Montana as revealed by their questionnaire responses:

1. Vocational education programs tend to strengthen the general education program of a school district.

2. The schools of the State are more effective in providing young people a good foundation for college than for educating them for adult living or preparing them to earn a living.

3. Public education should prepare youth not planning to attend a four-year college for entrance into jobs such as sales, office, skilled, and technical employment.

4. Post-secondary preparation for entrance into jobs should be provided by area vocational-technical schools rather than by community or junior colleges or by four-year colleges.

5. Post-secondary vocational-technical schools in Montana should be both commuting and resident schools.

About one-half of the secondary school principals who responded to their questionnaire reported that they think that no more than 40 per cent of their high school pupils have the ability and interest, after graduation, to profit from a four-year college program; about an additional 30 per cent of their pupils could profit from two-year post-secondary programs leading to employment in business, technical, or other semiprofessional positions; and about 20 per cent could profit from short-term special educational programs leading to employment of such types as service, skilled, sales, etc.

The majority of the 152 banks and retail firms which returned their questionnaires reported they had no more than 10 employees, although there were 20 per cent of them which employed more than 30 persons each and five of the responding firms had over 100 employees each. Almost 90 per cent of the 2,661 total employees reported by these firms had been employed from the county in which they were employed. Of the total number of new employees during the last 12 months, the banks reported the largest numbers were in these categories: clerical, bookkeeping-accounting, and secretarial. The retail firms had employed most persons as sales workers and supervisors.

Between one-eighth and one-fourth of the reporting business and banking firms indicated it was difficult to secure the type of worker needed in each of these categories: sales; secretarial and stenographic; accounting, bookkeeping, and data processing; and supervisory and managerial. There were many other respondents, however, who reported that good workers were available in all categories. Between one-fourth and one-half of the respondents indicated that the majority of their workers needed on-the-job training, but very few reported the need to send any of their employees for special training outside the respondent's firm. There were, however, no more than 4 per cent of the respondents who indicated that workers in any of the four groups of workers needed no training prior to hiring. Following is a summary of the opinions of the majority of the respondents from banks and retail firms as to the best way(s) to prepare these four types of workers:

Type of worker	Type of preparation
Sales	High schools, post-high schools
Secretarial, stenographic	Business schools, high schools
Accounting, bookkeeping, data processing	Business schools, other types of post-secondary schools
Supervisory, managerial	Colleges, post-secondary schools

The 151 responding manufacturing firms reported a total of almost 12,000 employees whom they classified as follows:

Type of worker	Per cent
Unskilled	44
Skilled	28
Operators of equipment (single skill)	14
Secretarial and clerical	5
Technical	5
Professional (engineers and others)	4

There was wide variation among the responding manufacturers of the State in regard to job titles for both technicians and skilled workers. The food companies and paper and printing companies, especially, reported many different types of job titles for technicians, and the lumber and wood products companies listed many job titles for skilled workers. In quite a number of instances the same job titles were classified by some respondents as technician, by others as skilled. This type of confusion occurs in many states and in many industries.

One-fifth of the respondents indicated it was difficult to secure the type of technician needed, and two-fifths of them reported it was difficult to get the type of skilled worker needed. There were, however, some who stated it was no problem to get the number needed.

Eight of the 18 questionnaire forms used in the Montana survey included a section which listed a number of types of skilled and technical workers for which the respondent was to indicate the extent of need (very great, some, or little) in Montana for training for these types of workers. While not all of these questionnaire lists of skilled and technical workers were exactly identical, except for one of the eight forms the lists were substantially the same. Responses for these programs were compiled from the several questionnaire forms, and Table 31 presents the 20 skilled occupations for which at least 30 per cent of the 900 respondents, from all parts of the State, indicate that programs of preparation are "very much" needed in Montana.

Regional differences are most apparent in Table 31 in the per cents shown for "forestry worker." In the eastern section of the State, the need for this type of preparation program is not nearly as obvious to the respondents as in the northwestern section where forestry and lumbering activities are more important. In addition to the occupations listed in Table 31, there were other skilled occupations for which certain subgroups of questionnaire respondents indicated there was a great need for preparation programs. These occupations and the per cent of the subgroup indicating great need are listed below in those cases where the proportion so indicating was at least one-fourth.

Skilled occupation for which the need for preparation program is very great	Per cent of respondents in subgroup
Baker	39% - State Employment Service
Cook, commerical	68% - State Employment Service
	37% - southwestern section of State
Waiter and waitress	31% - school administrators and counselors
	36% - special Montana groups
	75% - State Employment Service
	31% - southcentral section of State
	34% - northcentral section of State

Skilled occupation for which the need for preparation program is very great	Per cent of respondents in subgroup
Dental assistant	43% - special Montana groups
Medical assistant	32% - eastern section of State
	35% - northcentral section of State
	32% - school administrators and counselors
	33% - State Employment Service
	45% - special Montana groups
Instrument repairman	31% - retail merchants
	25% - banks
Grader, lumber	32% - northwestern section of State
	43% - State Employment Service
Scaler, log	32% - State Employment Service
Timber faller	39% - northwestern section of State
	57% - State Employment Service
Farm machinery operator	38% - State Employment Service
Draftsman, architectural	31% - special Montana groups
Draftsman, mechanical	38% - special Montana groups
Painter (construction)	31% - special Montana groups
Plasterer	31% - special Montana groups
Printer	33% - special Montana groups
Sheet metal worker	48% - special Montana groups
	32% - State Employment Service

In Table 32 are listed the 16 technical programs which are considered by the largest number of the total respondents to be needed very much in Montana. Here also it may be observed that the need for forestry workers is most keenly sensed by respondents living in the northwestern part of the State. In addition to the technical programs shown in Table 32, there were several other technician programs which were mentioned by sizable proportions of certain subgroups. Information concerning these follows.

Technician program needed very much	Per cent of respondents in subgroup
Agronomy and conservation	32% - southcentral section of State
	40% - special Montana groups
Food processing	40% - special Montana groups
Chemical engineering	30% - eastern section of State
	31% - southcentral section of State
Industrial engineering	38% - special Montana groups

(Continued) (Continued)

Technician program needed very much	Per cent of respondents in subgroup
Metallurgical engineering	33% - special Montana groups
Office management	30% - eastern section of State
	36% - southcentral section of State
Food service management	33% - special Montana groups
	35% - State Employment Service
Hotel and motel management	31% - special Montana groups
Specialized saleswork	38% - special Montana groups
	39% - State Employment Service
Retail management	30% - southcentral section of State
	31% - special Montana groups
	35% - State Employment Service
Store management	32% - northcentral section of State
	32% - southcentral section of State
	38% - southwestern section of State
	35% - retail merchants
Water and sewage plant management	34% - eastern section of State
	36% - special Montana groups

TABLE 31

SKILLED OCCUPATIONS FOR WHICH PREPARATION PROGRAMS ARE VERY MUCH NEEDED IN MONTANA, ACCORDING TO RESPONDENTS TO SURVEY QUESTIONNAIRES

Occupation for which preparation programs are very much needed	Per cent of questionnaire respondents in					Per cent of total respondents
	Eastern	North-central	South-central	South-western	North-western	
Automobile mechanic	66	67	70	49	61	63
Practical nurse	71	54	64	51	53	59
Radio-TV serviceman	54	55	56	43	44	51
Diesel mechanic	50	53	47	45	50	49
Electrician, construction	55	46	44	39	47	46
Carpenter	51	43	45	41	39	44
Auto body and fender repairman	46	47	47	40	39	43
Plumber	45	44	50	31	41	43
Farm machinery mechanic	47	48	46	30	37	42
Welder	43	39	53	32	40	42
Forestry worker	26	39	33	39	57	39
Bookkeeper	37	36	41	36	35	37
Stenographer	34	35	40	38	41	37
Electrician, industrial	40	32	37	32	35	36
Typist	39	35	36	34	32	35
Machinist	38	34	34	34	28	34
Office machine operator	39	26	37	35	32	34
Air conditioner and refrigerator mechanic	37	36	32	30	19	31
Data processing workers (operators and key punch)	33	28	30	33	32	31
Sales worker	32	29	33	26	32	31

Source: SCHOOL SURVEY SERVICE questionnaires.

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TABLE 32

TECHNICIAN PREPARATION PROGRAMS NEEDED VERY MUCH IN MONTANA, ACCORDING TO RESPONDENTS TO THE SURVEY QUESTIONNAIRES

Technical programs needed very much	Per cent of questionnaire respondents in					Per cent of total respondents
	Eastern	North-central	South-central	South-western	North-western	
Medical	53	45	44	38	39	44
X-ray	49	45	46	36	37	43
Dental	51	44	39	31	38	41
Law enforcement science	49	39	44	32	35	40
Construction engineering	44	36	41	35	38	39
Forestry engineering	33	30	32	36	49	36
Aeronautics engineering	40	39	38	31	24	34
Data processing (programmer)	32	32	36	34	30	33
Electrical engineering	39	32	37	27	30	33
Electronic engineering	30	31	36	32	29	32
Mechanical engineering	43	33	32	25	27	32
Marketing management	33	32	21	35	30	30
Supervisory work	31	39	25	28	26	30
Agribusiness	39	21	38	24	20	29
Executive secretarial work	29	28	36	27	27	29
Civil engineering	32	30	26	29	27	29

Source: SCHOOL SURVEY SERVICE questionnaires.

Reactions of Noneducational Personnel

Members of the Survey Staff personally contacted, in addition to many educators, a substantial number of persons not connected directly with education. The reactions of such personnel are summarized in the following paragraphs. Included also in these observations are some items taken from the Survey Staff's questionnaires to manufacturers and to special groups.

At the State government level, interviews were held and pertinent printed materials were collected from several agencies involved in the economic and manpower development of the State. Conferences were held with one or more persons in the Montana Department of Labor and Industry, The Manpower Development and Training Department, and the Montana State Employment Service. The representatives of these agencies were not only extremely courteous but helpful in making data available and in answering questions and in expressing opinions. They were all highly interested in the purpose and possible contribution the survey might make toward meeting the State's manpower needs as well as meeting the needs of youth and adults for vocational and technical education.

It was evident from the beginning that there was general agreement among State government leaders that Montana was fortunate in having a labor surplus which might entice industry into the State. However, they generally felt that the young citizens of Montana needed vocational preparation even though many of them would have to leave the State for employment.

The poor quality of programs and the lack of selection criteria for students enrolled in high school vocational programs were often expressed as deterrents to the expansion and growth of needed vocational education. There seemed to be little question in the minds of these government personnel that a much expanded program is needed, particularly in such occupations as machine trades, auto mechanics, printing, electronics, building trades, and auto body and repair.

The most frequent recommendation made by the representatives of these governmental agencies was that all vocational skilled and technical instruction be removed from the secondary schools. This opinion is not based on the lack of need for such training but rather on the apparent existence of the general educational philosophy that appears to dominate secondary schools. These persons interviewed reported that key educational leaders appear to feel that high schools are basically academic and that high schools would be sacrificing something if vocational programs were to enroll quality students for substantial blocks of time. Few high schools in the State, they say, could afford to operate a trade and industrial program of sufficient depth and quality to develop the skills and technical knowledge essential to today's world of work.

The apprenticeship system as determined from interviews with several Federal apprenticeship officials is extremely limited in Montana. This, of course, places an added burden on public vocational education to prepare properly, in a more formal educational setting, persons for entry and advancement into the skilled occupations. Both State and Federal apprenticeship personnel were concerned with not only the quality of high school vocational students who should be eligible for openings in the apprentice programs but also with the failure, in most cases, to schedule for high school programs time for the related technical instruction separate from time for the skill (shop) development. They were, likewise, highly concerned over the absence in most areas of the State of the opportunity for indentured apprentices to attend related instruction in public vocational classes during their apprenticeship period.

Contacts were made by the Survey Staff with a substantial sampling of industries in the State. A concerted effort was made to interview top management in as many types of industry as possible. Visited personally by members of the Survey Staff were food processing and printing industries, public utilities, construction contractors, and manufacturers of machinery, paint, electronic equipment, and building supplies. It was of considerable interest to the Survey Staff that, collectively, the personnel conferred with were in general agreement with the following.

1. The high schools in Montana do not operate quality depth programs of vocational trade and industrial education.

2. Frequently only the less able students are encouraged to enroll in the vocational programs.

3. Representatives of industry are neither requested by the schools to serve on advisory committees nor asked for advice about how to improve their vocational programs to meet more nearly the skilled needs of employers.

4. Employers are interested in having extension (upgrading) training available for their employees.

5. Schools such as North Dakota's State School of Science at Wahpeton are urgently needed in Montana to provide industry with technical manpower and to help attract industry to the State and to keep more of Montana's greatest resource - their young people - in the State.

6. Every person contacted felt that Montana could support, financially and through potential enrollments, only four to six well-placed and well-equipped vocational-technical education centers.

7. There is practically no communication (coordination) between secondary vocational education programs and industrial management and labor.

8. Few employers in the State have had experience with graduates of vocational programs.

9. They emphasized the need for the development of depth programs of high quality throughout the State.

10. All noncollege bound youth should have quality vocational preparation available to them through public education.

11. Industry, if approached, would support vocational-technical schools, and representatives of both labor and management would welcome the opportunity to serve on vocational advisory committees.

12. The area school concept which is the only solution to Montana's need for vocational-technical education does not and cannot function effectively under the administration of any single local school district board of education.

13. The State's required program for secondary schools appears to be dominated by the college philosophy of academic achievement which prevents sound vocational programs being operated to serve those preparing for employment.

14. In the preparation of vocational-technical teachers, there is inadequate attention to their occupational competency in the teaching field.

In addition to these reactions which represented general agreement, a number of other reactions of interest were obtained by the Survey Staff in their conferences with employers and labor leaders. One industrialist expressed his pleasure at being contacted and emphasized his interest in assisting, if asked, in the development of quality programs in the field of vocational-technical education. He seemed encouraged by the fact that the State Board of Education was having the present survey made. Communications in many places appeared to be a problem, even in communities with vocational programs, where it was found that labor and industrial leaders very frequently did not understand quality vocational education or know about these programs. Several employers and labor leaders expressed the view that even if Montana could not employ all of its youth, these youth should still have the opportunity for vocational and technical education so that if they found it necessary or desirable to leave the State for employment, they would have salable skills to help them compete favorably in the labor market. In several locations where the schools were reported to have programs of business (office practice) courses, local employers were concerned over the fact that they frequently could not use the graduates since the program was not geared to the skills and practices essential for employment. In none of these communities was there evidence that a real effort had been made by the school to find out what skills were needed or would be of benefit to employers. This again, no doubt, points up the major philosophy of the secondary schools as being academically oriented and having little interest toward providing high school programs of a depth nature to prepare the noncollege bound for the world of work.

Almost without exception, employers expressed an interest in working with vocational-technical schools in the development of quality cooperative programs in all areas of vocational education.

A number of contacts were made with leaders of organized labor in Montana including those at the top echelon of leadership in the State. The Survey Staff was impressed by the sincerity of the reactions and opinions of this important segment of Montana's productive labor force.

Here again there was a strong feeling that quality programs of vocational trade and technical education could not be provided at the high school level due to the prevalent philosophy of secondary education in the State and due to the many small high schools which could not equip or support a sound program of vocational education.

Strong feelings were evident that post-high school vocational centers were, in the opinions of these industrial leaders, the only possible way that noncollege bound students could be expected to have the benefit of quality occupational preparation. It was emphasized that employers were not interested in, nor could highly skilled trades absorb, the quality of students now enrolled in the approved high school programs of trade and industrial education. These labor leaders did indicate a strong need for high schools to plan for and provide for the noncollege bound student stronger programs of more practical mathematics, applied communications, applied science, and an expanded program of industrial arts exploratory courses. These courses would be of direct benefit in assisting the student to make wise occupational decisions and would be applicable later in his occupational field.

It was apparent from the review of the questionnaire data that, as in most states, employers are not yet able to identify, with any great degree of understanding, the differences between skilled workers and technicians in terms of educational requirements. Many times, limited skilled operators were referred to as technicians even though the questionnaire contained a definition of each of these levels. This confusion, of course, is natural since a nationally accepted definition of "technician" is only just beginning to come to mean a paraprofessional who requires at least two years of post-high school technical instruction before employment. A major finding from the questionnaire data revolved around the very, very low turnover rate for employees in the skilled and technical occupations in the State of Montana. This low turnover rate naturally has considerable implications for the number of openings available for vocationally prepared young people in the State. In terms of sources of personnel, it can easily be understood why most employers indicated that on-the-job training has been their source of training in the past. This is, no doubt, simply due to the fact that there were few other opportunities available for vocational training. However, all of them reported as a potential source, graduates from vocational and technical school programs. It was found, in fact, that some employers employed personnel from as far away as the North Dakota State School of Science. Further analysis of the questionnaires returned by employers throughout the State confirms the conclusion that most technicians presently employed were obtained from the State of Montana and prepared through on-the-job training. In the skilled occupations level, almost all are obtained from Montana and, again, either trained on-the-job or recruited from other companies. It is generally recognized that unorganized on-the-job training is one of the most ineffective and costly systems of developing a work force. Pirating skilled workers from other employers also has its limitations and certainly does not improve the manpower picture in any state. It was evident from the responses, that very few skilled or technical workers were being obtained by the responding manufacturers from technical or vocational schools. The few that were employed were, in the main, reported as coming from outside the State. Those few employers having experience in obtaining technicians from technical schools rated them, in almost every instance, as good. Likewise, those employers, although limited in number, who had obtained skilled workers from vocational and technical schools rated them, generally, as good. By far, the great majority of all employers expressed the view that the ideal source of skilled and technical manpower should be the graduates of vocational and technical schools.

Employers were asked about their future needs for both technicians and skilled workers within the next year, the next two years, and the next five years. Table 33 reports the results of this question. This table indicates that for replacement alone within the five-year period, approximately 255 technicians will be needed, with an additional 197 needed for anticipated expansion. In the skilled occupations, over 900 will be needed for replacement within the five-year period or an average of about 300 per year, and over 700 will be needed for expansion. These data certainly support the contention that Montana has need for skilled and technical schools to prepare persons for these levels of employment.

TABLE 33

EMPLOYERS' ESTIMATES OF SKILLED AND TECHNICAL MANPOWER NEEDS FOR THE NEXT FEW YEARS

Years	Estimated needs* for technicians		Estimated needs* for skilled workers	
	Replacement	Expansion	Replacement	Expansion
1	74	54	313	240
2	93	55	280	211
5	88	88	316	278
Total	255	197	909	729

Source: SCHOOL SURVEY SERVICE questionnaires.

* Numbers based upon averages within the ranges provided.

Some Additional Aspects Related to Vocational-Technical Education

For years the instructional programs of most elementary schools throughout the nation have included art and craft work and other types of manipulative experiences and physical activities as part of their basic educational program. The Survey Staff believes that a more conscious and carefully planned effort should be made in the elementary schools to utilize more fully these opportunities for exploratory experiences to develop the manipulative skills of children. These experiences should begin with activities in kindergarten and first grade which involve the use of the large, usually rather poorly coordinated, muscles. As the child matures, increasing use can be made in these manipulative activities of the smaller, gradually better coordinated, muscles.

Along with such overt activities there can increasingly be an emphasis with elementary school children to help them understand the working world - the various kinds of work done by the adults in their community and the income from such work, how housing is provided for families and businesses, how food is grown and processed, the transportation of people and the distribution of materials, how business is conducted in offices, how government operates, and how people are kept well by doctors and dentists. All of these kinds of information are influential in helping children understand work in its many facets, and thus they can begin to think, in a very elementary way, about some possibilities for their own future part in the workaday world.

Both types of activity and learning indicated above can be varied and intensified as the children move into junior high school, with its continuing exploratory emphasis, so that when they get into senior high school many will begin to think about their special interests, abilities, and aptitudes with respect to later life.

Below are listed, for illustration, a number of manipulative experiences in which young children might participate as a beginning toward the emphasis espoused in the preceding paragraphs.

Kindergarten or grade 1

(a) Use scissors and construction paper for making cutouts of cats, dogs, etc., which may then be colored with crayons.

(b) Sort spools and blocks by sizes and shapes and thread them on strings.

(c) Drive nails around the edges of a pointed board (assigned the role of a boat) to serve as posts for a lifeline.

Grade 4

(a) Use scales to weigh half-pound and pound quantities of clay, cooking ingredients, etc.

(b) Saw plywood strips to construct "personal" rulers.

(c) Saw boards, use hand drill and small bolts, washers, and nuts to construct a "classroom made" balance scale.

Grade 6

(a) Use pliers, hacksaw, and soldering iron to construct laboratory apparatus.

(b) Use aluminum, copper, and brass foil shaped over papier-maché to construct three-dimensional objects such as bookends and bas-relief plaques.

(c) Use tin snips and pliers to shape tin weathervane blades, aluminum flower boxes, and the like.

(d) Tool designs of animals, flowers, and abstract figures on foil, leather, and other materials with the use of dowel rods, punches, marking wheels, etc.[17]

Although industrial arts is not considered by most vocational educators as a part of vocational-technical education, this subject area should not be ignored in a study such as is herein being reported. It is universally recognized that industrial arts represents an important exploratory and prevocational offering at the secondary school level (grades 7-12). It merits, therefore, a brief discussion here.

In some of the preceding paragraphs were stressed the values of planned manipulative experiences in the elementary school grades (k-6). Industrial arts can well be a continuation of these experiences into the junior high school level (grades 7-9) and then into the senior high school level (grades 10-12).

In industrial arts courses the secondary school pupils can explore in many ways their interests, dexterities, and other special aptitudes that will, in post-secondary life, stand them in good stead vocationally. At the junior high school level, courses that deal with the following would be quite appropriate: woodwork, metalwork, drawing and sketching, printing and graphic arts, plastics, and power (electric and small engine). At the senior high school level appropriate courses include woodwork, metalwork, drafting, printing (letterpress and offset), plastics, power (internal combustion), and electricity and electronics.[18]

To capitalize fully on the exploratory values of industrial arts, particularly at the junior high or middle school level, schedules should be flexible so that pupils may not be required to take a specific industrial arts course for a full year or, in some cases, for even a full semester.

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[17] These illustrations are taken from a paper prepared especially for the Montana survey by Dr. Lowry W. Harding, Professor of Education (Elementary) at Ohio State University.

[18] These course suggestions were taken from a paper prepared especially for the Montana survey by Dr. Robert W. Haws, Professor of Education (Industrial Arts) at Ohio State University.

CHAPTER 2*

VOCATIONAL EDUCATION IN AGRICULTURE

Agriculture is a dynamic and changing industry. It is basic and essential to the progress of America. In its role of undergirding our own economic structure and contributing to our nation's effort in maintaining world peace, it requires the services of competent and dedicated workers. Some of these will always be engaged in production agriculture, or farming and ranching; others will work in nonfarm agricultural occupations through which supplies and services that farmers need will be provided and the transportation and marketing of the agricultural products will be affected.

The increasing complexities of the agricultural industry have given rise to increasingly complex educational needs for those who will work in the broad field of agriculture, including education for not only farmers but also for those who will be engaged in the nonfarm occupations which require knowledge and skills in agricultural subjects.

At the same time that there has been a decrease in the number of farms and the number of workers required on them, there has been an increase in farm size and an involvement of highly specialized mechanization and management. The need for special skills extends today to the hired farm worker as well as to the farm manager. A great number of nonfarm agricultural occupations, many of them highly technical, have evolved. The number of persons engaged in part-time farming as a means of supplementing family income is increasing. Preparation for farming and other agricultural occupations must be accepted and implemented as an important responsibility of our public educational system but in terms of changing patterns.

Agriculture is still Montana's number one industry. As shown in Table 34 the total cash receipts from the sale of principal farm products and government payments have increased from approximately $360 million in 1950 to over $470 million in 1965. Livestock and livestock products account for 51 per cent of the total income, while crops and government payments account for the balance.

In contrast to the national trend, an increasing percentage of the land area of Montana is being utilized for farms. Of the 93,271,040 acres in land area, 71 per cent were in farms in 1964 compared to 69 per cent in 1959. Of this total, 1.8 million acres were under irrigation.

Although there was a decrease in the number of farms in Montana from 28,959 in 1959 to 27,020 in 1964, the average farm size increased from 2,213 acres to 2,437 acres.

Equally significant from the standpoint of the State's economy, is the increase in the value of the land and buildings of the average farm from $76,761 in 1959 to $105,230 in 1964.

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*Written principally by A. R. Bunger.

TABLE 34

CASH RECEIPTS FROM SALE OF PRINCIPAL FARM PRODUCTS AND GOVERNMENT PAYMENTS
(In thousands of dollars)

Year	Crops	Livestock and livestock products	Total receipts from marketing	Government payments	Total of all cash receipts
1950	$187,173	$166,607	$353,780	$ 6,085	$359,865
1955	207,434	160,888	368,322	4,160	372,482
1960	185,281	222,065	407,346	15,640	422,986
1965	179,394	241,107	420,501	51,057	471,558

Source: Montana's Department of Planning and Economic Development, Montana Statistical Review, p. 1.

Historical Developments and Legal Basis

Varied attempts were made to provide instruction in agriculture in the public schools of the nation prior to 1917, but the real impetus to vocational education in agriculture was the passage of the Smith-Hughes Act of 1917. Through this Act, Federal funds were provided for the promotion of vocational education in agriculture, the program to be of less than college grade. Subsequent acts have provided supplementary funds under provisions similar to those of the organic Smith-Hughes Act.

Under these Federal acts, the following kinds of instruction in vocational agriculture have been provided:

1. All day instruction for boys 14 years of age or older as a part of the regular secondary school program
2. Instruction in part-time classes for out-of-school young farmers who are becoming established in farming
3. Adult evening classes for farmers who wish to improve their farming methods and their farm living
4. Day unit classes in which instructors may serve more than one community by offering one or more classes of vocational agriculture for pupils in two or more schools

The most recent Federal act affecting all of vocational education, the Vocational Education Act of 1963, made provisions to broaden and strengthen the national program of vocational education in agriculture. It provides that

> Vocational education in agriculture . . . shall be designed to meet the needs of persons over 14 years of age who have entered upon or are preparing to enter: (a) upon the work of the farm or farm home, or (b) any occupation involving knowledge and skills in agricultural subjects, whether or not such occupation involves work of the farm or of the farm home.[1]

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[1] Section 104.60, Administration of Vocational Education - Rules and Regulations, Vocational Education Bulletin No. 1, Revised 1966.

In the regulations for the administration of vocational education programs under the provisions of the Federal Vocational Education Acts, an agricultural occupation is defined as one involving knowledge and skills in agricultural subjects and which has the following characteristics:

1. The occupation includes the functions of producing, processing and distributing agricultural products and includes services related thereto.

2. The occupation requires competencies in one or more of the primary areas of plant science, soil science, animal science, farm management, agricultural mechanization, and agricultural leadership.[2]

Accordingly, the narrow concept, the extremely limiting restrictions, and the strictly "production" orientation of the original program of vocational education in agriculture have given way to a broad, challenging, and demanding program for a technological age.

In recent years there has been throughout the nation a slowing down in the increase in enrollment in high school classes in vocational agriculture. In some states there have been slight declines. Numerous factors have contributed to this. There have been tremendous developments and changes in farming and in agriculture nationwide during the past decade. Some of the major trends which affect enrollments and instructional programs in vocational agriculture nationally are the following:

1. There continues to be a consistent decrease in the number of economic size farms in the United States, and there is now less than 10 per cent of the total population directly engaged in farming as a main source of livelihood. However, there has been an increase in the number of small, part-time farms which serve to supplement the income and provide a significant family food supply for off-farm employed workers.

2. Along with the decrease in the number of farms and in the number of those engaged in farming is an increase in the size of farms.

3. Concurrently with the decrease in the number of persons engaged in farming has come a phenomenal growth in the number of agricultural businesses and industries which require and use persons trained as farmers. It has been found in some surveys that the demand for trained workers in agricultural businesses who need a knowledge of farming, obtained either by training, experience, or both, is one and one-half times the demand for workers in farming as such.[3]

4. In addition to the demand for agriculturally trained people in business and industry is the increasing demand for those trained to provide professional services to the farmer. Such persons are employed in the numerous agencies of the U.S. Department of Agriculture, by Agricultural Extension Service, as teachers of vocational agriculture, as agricultural agents by banks

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[2] Section 104.61, Administration of Vocational Education - Rules and Regulations, Vocational Education Bulletin No. 1, Revised 1966.

[3] S. S. Sutherland and O. E. Thompson, Training Required by Workers in Agricultural Business and Industry, California State Department of Education, 1957, 40 pp.

and other financial institutions, and by numerous other Federal, state, and local agencies.

5. At the same time there are evident the growth and developments in agricultural occupations, which are but one step removed from farming, there is evident a revolution in farming itself. The increase in mechanization of farm work and the growing application of electronics and other technologies to the production aspects of the industry stand as two of the most significant developments of recent years.

Even though these developments have been nationwide, their effects have been more pronounced in certain areas of the country than in others. No state or region, however, can escape the ultimate transition which is rapidly occurring, and the impact of this revolution is already affecting the economic and social well-being of every geographic sector of the nation.

Survey Plan and Procedures

The survey plan included the use of criteria for evaluating both the local programs of vocational education in agriculture and the State administration. Data were obtained from conferences with the State Supervisor of Vocational Education in Agriculture, the Director of the Division of Elementary and Secondary Education of the State Department of Public Instruction, and Agricultural Education Teacher Training Staff at Montana State University. Further data were gathered by visitations to local high school departments of vocational agriculture, by conferences with local school administrators and teachers, through questionnaires sent to all teachers of vocational agriculture in the State, and through personal interviews with key lay leaders of the State, directly or indirectly associated with agriculture. An examination was made of the available literature, records, and reports pertaining to the agricultural industry and to the current State programs of vocational education in agriculture.

Criteria for Evaluating State Programs

The following criteria may be used for evaluating any state program in vocational agriculture. They have been taken from a 1961 doctoral study by Robert E. Taylor at Ohio State University. These criteria provide the general framework within which the Montana program for vocational agriculture at the State level was appraised.

1. Supervision in vocational agriculture should provide leadership in appraising the needs for vocational agriculture.

2. Supervision in vocational agriculture should provide leadership in educational planning and involve in the planning process representatives of groups interested in the vocational agriculture program.

3. Supervision in vocational agriculture should aid in coordinating the efforts of agencies, groups, and organizations interested in improving vocational education in agriculture.

4. Supervision in vocational agriculture should stimulate local initiative and responsibility and coordinate the various elements into a unified state program.

5. Supervision in vocational agriculture should facilitate communications among all parties participating in the vocational agriculture program.

6. Supervision in vocational agriculture should contribute to the improvement of instruction.

7. Supervision in vocational agriculture should operate within a framework of functional written policies and procedures which have been developed cooperatively.

8. Supervision in vocational agriculture should cooperatively develop a program of public relations which adequately interprets to the public the purposes, procedures, and accomplishments of the complete vocational agriculture program.

9. Supervision in vocational agriculture should promote, conduct, and utilize educational research.

10. Supervision in vocational agriculture should encourage and assist in the evaluation of local vocational agriculture programs.

11. Supervision should provide for the evaluation of the supervisory program.

12. Preservice teacher education programs should be planned cooperatively with one or more institutions of higher education for the purpose of supplying the state with an adequate supply of carefully selected and well-prepared teachers of vocational agriculture.

13. Plans should be made cooperatively with teacher education institutions for inservice education needed to upgrade teachers of vocational agriculture.

Criteria for Evaluating Local Programs

The criteria for evaluating local programs of vocational education in agriculture must be general and have the built-in flexibility which permits adaptations to unique and peculiar local community situations. At the same time, however, the criteria must recognize the implications of national and international employment opportunities for those who prepare themselves for agricultural occupations. Criteria must also recognize the emerging concepts and the revolutionary changes in agriculture which are occurring at an accelerated rate.

The following criteria were considered in assessing the local programs of vocational agriculture in Montana:

1. The local program should meet the educational and training needs in agriculture of the local community, including youth and adults, and be based upon and evaluated in terms of specifically stated objectives.

Too often the effectiveness of an otherwise sound program is negated because of a failure to develop and clearly state the program objectives and to communicate these objectives in a meaningful way to students, parents, other school personnel, the lay public, and potential employers.

2. The instructional program should be such that a variety of experiences are provided which are sufficient to prepare students for entrance into agricultural occupations in accordance with their occupational objectives.

Classrooms, shops, laboratories, work experience on-farm and off-farm, cooperative part-time employment, and other educational experiences must be provided if the potentially wide scope of occupational objectives is to be related to instruction.

3. Adequate physical facilities for teaching should be available.

In addition to the conventional facilities of the public school, there are many opportunities to utilize the facilities of local business and industry as extensions. In view of the many different job opportunities and the natural cluster of agricultural jobs, both on and off the farm, maximum utilization of all community resources needs to be made if students are to receive training compatible with their objectives.

4. Teachers of vocational agriculture should have an agricultural background and should have received current inservice education to maintain competency in relation to the changing nature and requirements of the agricultural industry.

Inservice teacher training should be a responsibility of state supervision and a function of the state teacher training service. It should be provided through a combination of on-campus and local or sectional experiences. It should be cooperatively planned and conducted as a systematically organized part of the total state program of vocational agriculture.

5. Instructional activities should be based on sound and clearly understood objectives and planned on a long-term basis which will ensure the development of knowledge, skills, and competencies necessary for agricultural occupations.

6. Instructional materials should be available in sufficient quantity and quality to ensure an effective instructional program.

The broadening scope of knowledge related to agriculture and the implications of mechanization and technologies dictate the need for a great wealth of teaching materials which give meaning and understanding to the instructional program.

7. Students should be enrolled in the vocational agriculture program who can reasonably be expected to benefit by the training.

Through a program of vocational counseling and exploration, students enrolled should either have made a specific agricultural occupation choice or have chosen the broad field of agriculture within which they will pursue their occupational careers.

8. The program should be developed, conducted, and evaluated with the assistance of a local advisory committee, representative of the several facets of the agricultural industry.

The involvement of the community in an agricultural program is essential. The assurance of quality content comes through the counsel, advice, and recommendations of lay representatives. Communications are enhanced among those who must support the program.

9. The program should enjoy prestige among all individuals and groups associated with it.

It is important that school administrators, other teaching personnel in the school and students in the school look upon the vocational agriculture program as a sound educational process contributing to the adequate fulfillment of the educational objectives of those enrolled. Equally important is the attitude of farm organizations, agribusiness organizations, local business and industry, and parents in general.

10. Evaluation of the program should be a continuous process and should apply to all of its aspects.

It is essential to provide for the periodic assessment of student progress, instructional program, facilities, students' occupational experience programs, out-of-school youth and adult programs, placement, and outcomes in terms of objectives.

The Growth of Vocational Agricultural Education in Montana

Vocational agricultural education is conducted in Montana under provisions of the Smith-Hughes Act (Public Law No. 347, 64th Congress); the George-Barden Act (Public Law No. 586, 79th Congress); and the Vocational Education Act of 1963 (Public Law 88-210, 88th Congress). Section 75-4241, Revised Codes of Montana, 1961, permits the State to accept provisions of Congress for the support of vocational education programs.

Historically, vocational education in some communities of Montana predates the Federal Smith-Hughes Act of 1917. Early records indicate classes in agriculture at the turn of the century, and in some systems machine shop courses were a part of the curriculum for several years prior to the Smith-Hughes legislation.

Since 1917, vocational education has been an integral part of many of the State's high schools. Vocational agriculture has enjoyed one of the longest continuous educational services to the youth and adults of Montana of any of the recognized vocational education areas.

The growth of the number of vocational agriculture programs in Montana has been steady under the encouragement of Federal aid but without the incentive of any appreciable State support. During the post-World War II years the growth leveled off at approximately 60 departments after reaching a maximum of 62 in 1955.

For the sake of showing geographic distribution and a comparative area analysis of vocational agriculture education in the State, most questionnaire data have been summarized according to five separate sections of the State. In Table 35 are shown the distribution of the

TABLE 35

DISTRIBUTION OF VOCATIONAL AGRICULTURE DEPARTMENTS
BY SECTIONS OF MONTANA, 1967-68

Section of the State*	Number		Number of counties	
	Counties	Departments	With departments	Without departments
Eastern	17	18	10	7
Northcentral	10	10	6	4
Southcentral	12	18	9	3
Southwestern	10	7	5	5
Northwestern	7	7	4	3
Total	56	60	34	22

Source: Survey Office records.

* These sections do not coincide exactly with the five areas recommended in Chapter 8.

State's 56 counties and the 60 departments of vocational agriculture in terms of the five sections. During the current school year, 1967-68, the 60 departments are distributed among 34 of the 56 counties of the State. Sixteen, or nearly one-half, of those served have but one department.

Figure 2 is presented to show the locations of the 60 departments of vocational agriculture in Montana's high schools for 1967-68. Also evident are the 22 counties having no such departments. Ten of these counties are in the eastern 28-county half of the State and 12 are in the western 28-county half. Carbon County, with five departments, leads in the number of departments.

The Vocational Agriculture Program at the State Level

The Montana State Plan for Vocational Education makes provisions for State administration and leadership of vocational education in agriculture. In theory, the plan provides for a staff sufficiently adequate to administer, supervise, and evaluate vocational agriculture programs, services, and activities to the extent necessary to assure quality in all vocational agriculture programs which are realistic in terms of actual or anticipated employment opportunities and suited to the needs, interests, and abilities of those being trained.

The implementation of the provisions of the State Plan to accomplish the purposes of administration and leadership has fallen far short in some vitally important and critical areas. State-level supervision should provide leadership in appraising the needs for vocational agriculture and in educational planning to fulfill those needs. In fulfilling this role, leadership would involve representatives of groups, organizations, and agencies interested in the vocational agriculture program.

Adequate State staff personnel is not currently provided in Montana to allow a true role of essential leadership to be performed. The function of supervision for vocational agriculture is carried out by one person. Although the person in the present position is well qualified by preparation and experience, the numerous duties of a regulatory nature and other attendant assignments imposed upon him preclude any reasonable degree of effectiveness in the leadership role.

There are many agencies, groups, and organizations in the State which have an interest in and a concern for vocational education in agriculture. The State supervisory staff should aid in the coordination of the efforts of these interests in improving the Statewide program. Many of these agencies must be considered to be the consumer of the product of the vocational agriculture program. Supervision, therefore, must assume a consumer relations role.

Adequate time must be afforded the supervisory staff to facilitate communications among all parties participating in the vocational agriculture program. It is of the greatest urgency that communications between the staff and appropriate personnel of agencies under contract to provide training be maintained in an open, free-flowing, and professional manner. It is the general feeling of local school administrators and teachers that this is not true. The criticism is not of the one Supervisor, but of the policy or the administrative position which stands in the way of securing an adequate staff to engage in this activity to the extent it is desired and needed.

Instruction is the means through which the objectives of vocational education in agriculture are achieved. Many factors contribute to the effectiveness of instruction, but one of the primary contributors to the improvement of instruction is the State supervisory staff. To be effective in fulfilling this responsibility, staff must be free to coordinate and cooperate with the several agencies that might have some responsibility, directly or indirectly, for instruction. Such responsibilities would include, but not necessarily be limited to, teacher

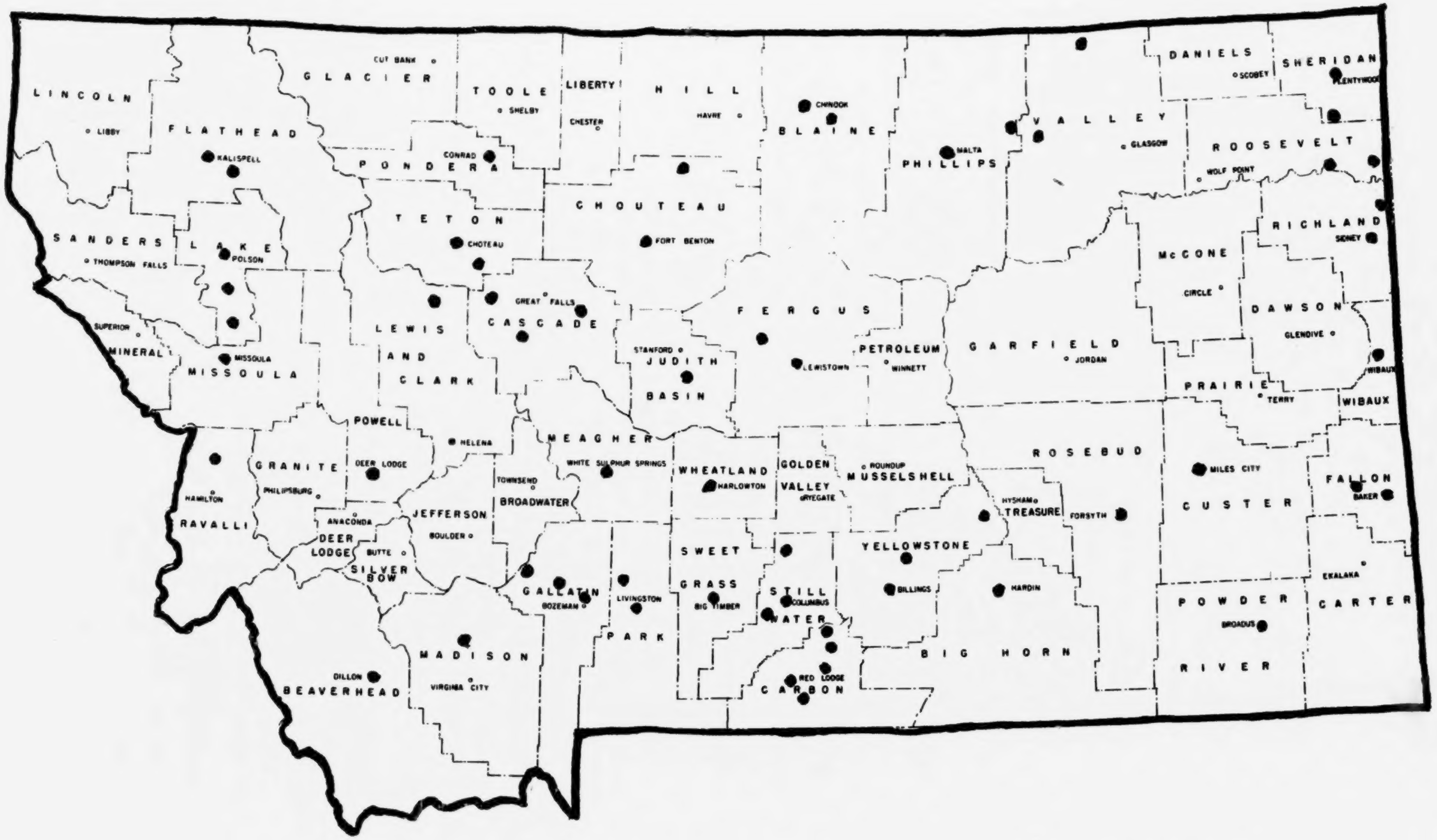
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
SUPERIOR
MINERAL
MISSOULA
LEWIS AND CLARK
HELENA
CASCADE
GREAT FALLS
JUDITH BASIN
STANFORD
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
GARFIELD
JORDAN
McCONE
CIRCLE
RICHLAND
SIDNEY
DAWSON
GLENDIVE
PRAIRIE
TERRY
WIBAUX
POWELL
DEER LODGE
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
MEAGHER
WHITE SULPHUR SPRINGS
TOWNSEND
BROADWATER
JEFFERSON
BOULDER
ANACONDA
DEER LODGE
BUTTE
SILVER BOW
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
ROSEBUD
FORSYTH
TREASURE
HYSHAM
CUSTER
MILES CITY
FALLON
BAKER
CARTER
EKALAKA
POWDER RIVER
BROADUS
SWEET GRASS
BIG TIMBER
STILLWATER
COLUMBUS
YELLOWSTONE
BILLINGS
BIG HORN
HARDIN
CARBON
RED LODGE
PARK
LIVINGSTON
GALLATIN
BOZEMAN
MADISON
VIRGINIA CITY
BEAVERHEAD
DILLON

Figure 2. Locations, by counties, of programs of vocational agriculture in the high schools of Montana, 1967-68

(Source: Montana's Acting Supervisor of Agricultural Education) training, curriculum development, facilities planning, materials development, research, community services, program conduct, and evaluation.

If State supervision is to serve its purpose - that of performing both regulatory and leadership functions - it must operate within a framework of functional written policies and procedures. If it is expected that there would be understanding of the purpose of supervision and response to it, then it follows that policies and procedures must be developed cooperatively by those involved. There has been very little incentive in Montana to develop policies and procedures for supervision since it obviously would be impossible to implement them with the limited State staff.

In the course of personal interviews with 19 Montana teachers of vocational agriculture, each was asked about the present effectiveness of State supervision and how it can be improved. Following are excerpts from responses:

Regarding Effectiveness of State Supervision

"It is nil"

"So infrequent as to be ineffective"

"Very little assistance from State staff"

"Haven't had any and don't need it"

"It is mainly regulatory"

"Can't recall ever having had a supervisory visit"

"We just don't get any help from the State"

"There was helpful supervision up to a few years ago; now there is no staff to do it"

"Not much 'on-site,' an occasional State or regional meeting"

"Last visit was 2 1/2 years ago for one-half day"

"Supervision has been nil for last two years"

"Mostly by mail"

Regarding How It Can Be Improved

"More professional help is needed on the State staff"

"Provide area supervision - at least for first-year teachers"

"Improve communications between State and local personnel"

"Increase personnel and provide regular visits"

"Need more help to give guidance to curriculum change and to identify new directions"

"Need more staff to render field service"

"Provide State leadership to local schools for evaluation and improvement"

"Must add staff for field service with teachers and to promote vocational agriculture"

"Help with program review and evaluation"

"Add personnel with leadership ability and vision of the job to be done"

"Anything would be an improvement"

Seventeen of the 19 vocational agriculture teachers who were interviewed specifically suggested the need for additional professional personnel on the State supervisory staff. One remarked somewhat cynically that he did not need supervision, and one gave no opinion.

It has long been an accepted practice in vocational education to utilize the counsel and advice of lay advisory committees, particularly at the local level. This is an emphasis properly given by most state staffs to local program directors and teachers of vocational subjects. It is somewhat surprising, therefore, to find that in Montana no regular use of a State Advisory Council for vocational agriculture has been made. Cognizance is given to the fact that a five-member Vocational Advisory Council was appointed by the State Board of Education in July, 1965, with the subsequent addition of two more members. There is no evidence or awareness of any guidance or counsel rendered by this Council to the State program of vocational agriculture through the professional staff or any of the State organizations concerned with the program.

The wisdom of involving representative members of the various interests of the agricultural industry in studying and researching the current and future needs of vocational education in agriculture, designing new curricula and revising old, developing policies and procedures for implementation of programs, and in general serving as an essential tie between the State supervisory staff and the public would warrant a State Advisory Committee for Vocational Agriculture. Such a committee would augment the services of the State Advisory Council for Vocational Education rather than supplant it.

Perceptions of Lay Leaders Representing the Agricultural Industry of Montana Concerning Its Vocational Agriculture Program

Selected leaders of agricultural organizations and associations were interviewed concerning their relationship, knowledge, and perceptions of the vocational agriculture program in the State of Montana. These were people who normally would have reasonable knowledge of the program and who should be expected to have some association with local programs, the State program, or both. Among those interviewed were representatives of farm organizations, agricultural publishers, farm equipment dealers, marketing associations, and the State Department of Agriculture.

The following responses should have significant implications for certain emphases in the State-level program of supervision:

1. What relationship does your organization have with the program of vocational agriculture - State or local?

   NONE: 30%   SOME: 60%   CONSIDERABLE: 10%

2. Are you familiar with the purposes and objectives of vocational agriculture?

   YES: 30%   NO: 30%   TO SOME EXTENT: 40%

3. Do you believe vocational agriculture is meeting the pre-employment training needs of beginning workers for on-farm and off-farm agricultural occupations?

   ADEQUATELY: 10% PARTIALLY: 60% INADEQUATELY: 0% DON'T KNOW: 30%

4. Do you believe the program of vocational agriculture has kept abreast of the changing conditions in the agricultural industry?

   YES: 20% NO: 50% NO OPINION: 30%

5. Do you believe vocational agriculture is meeting the training requirements of persons already employed in agricultural occupations who are in need of further training and upgrading?

   ADEQUATELY: 0% PARTIALLY: 30% INADEQUATELY: 30% DON'T KNOW: 40%

Additional observations by lay agricultural leaders:

"There needs to be more cooperation and better communication between education and the public."

"Stronger motivation is needed for students of vocational agriculture."

"There needs to be more encouragement for young people to move into the business of agriculture."

"There is a vital need for production agriculturists, as well as for more people trained for employment in related agricultural fields."

"School administrators and vocational personnel need to explore with business and industry the opportunities for occupational placement and attendant training programs."

"Vocational agriculture leaders must develop better communications with agricultural agencies and organizations."

"Coordination is essential to prevent duplication."

"Vocational agriculture curriculum content must be kept current, and there must be a continuous program of curriculum and program evaluation."

"Training for agricultural pursuits must be provided beyond high school."

"Vocational agriculture must expand greatly into the 'agribusiness' field."

"There must be long-range exploration of agricultural employment opportunities."

"Vocational agriculture needs to incorporate in its program some short, intensive, specialized programs such as heavy equipment operators, livestock handlers, etc."

"Vocational agriculture needs State support compatible with the contribution the industry makes to the State's economy."

The Vocational Agriculture Program at the Local Level

Data for the evaluation of local programs of instruction in vocational agriculture were obtained from three major sources: (1) copies of the special questionnaire sent to all teachers of vocational agriculture in the State, (2) observational visits to 19 departments selected in cooperation with the State Supervisor to provide a representative cross section of departments in the State, and (3) conferences with local administrators and teachers of vocational agriculture.

In Table 36 is shown a summary of questionnaires sent and returned in terms of the section of the State as well as for the total group of vocational agriculture teachers. In general, the per cents of return are very good.

TABLE 36

SUMMARY OF QUESTIONNAIRE RETURNS BY TEACHERS OF VOCATIONAL AGRICULTURE

Section of the State	Number of questionnaires		Per cent of return
	Sent	Returned	
Eastern	18	13	72
Northcentral	10	10	100
Southcentral	18	14	78
Southwestern	7	6	86
Northwestern	8	8	100
Total	61	51	84

Source: Survey Office records.

The questionnaire respondent was asked to provide his school's enrollments in vocational agriculture for three school years (1960-61, 1965-66, and 1966-67). Comparison of the 1965-66 enrollments with the 1960-61 enrollments showed that the programs of 68 per cent of the respondents had increased in number enrolled during that period. There were 60 per cent of the respondents who reported increased enrollments for the 1966-67 school year over the 1965-66 enrollments.

In Table 37 are shown the yearly enrollments in vocational agriculture in Montana high schools for the most recent 10-year period for which data were available. The indexes indicate that the three highest enrollment years were during the first five-year period, with the peak in 1958-59. The latest enrollment (1965-66) was only 69 pupils more than that at the beginning of the period (1956-57).

Certain comparative enrollment data for vocational agriculture for Montana and the 10 other Western states are presented in Table 38. Comparisons of enrollments for the base year (1955-56) with those for the last year shown (1963-64) reveal losses for Montana, California, Idaho, and Utah and gains for the seven others. The enrollment indexes (1963-64) for six of the 11 states are equal to or above the index for the United States as a whole. Montana is 12 index points below the national figure. Arizona and Idaho show no index losses for any year included in Table 38.

The expenditures for vocational agriculture programs in Montana for a recent 10-year period are shown in Table 39. A comparison of costs for the last and first years of that

TABLE 37

MONTANA HIGH SCHOOL ENROLLMENTS IN VOCATIONAL AGRICULTURE, 1956-57 THROUGH 1965-66

School year	Number	Index
1956-57	3,131	100
1957-58	3,648	117
1958-59	3,821	122
1959-60	3,526	113
1960-61	3,276	105
1961-62	3,000	96
1962-63	3,265	104
1963-64	3,140	100
1964-65	3,280	105
1965-66	3,200	102

Source: U.S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1957 through 1962); U.S. Office of Education, *A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education* (Fiscal years 1963 and 1964); Office of the Montana Director of Vocational Education (Fiscal years 1965 and 1966).

* 1956-57 used as the base year (index = 100).

TABLE 38

ENROLLMENTS IN VOCATIONAL AGRICULTURE IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT ENROLLMENTS, BY ALTERNATE YEARS, FOR 1957-58 THROUGH 1963-64

State	Enrollment 1955-56	Index* of enrollment			
		1957-58	1959-60	1961-62	1963-64
Arizona	1,908	105	105	105	132
California	17,840	95	104	99	86
Colorado	2,970	84	102	100	110
Idaho	3,938	102	109	113	114
MONTANA	3,204	114	110	94	98
Nevada	617	94	100	87	84
New Mexico	2,169	98	102	111	112
Oregon	4,734	111	116	109	118
Utah	4,738	88	88	85	91
Washington	9,227	95	94	101	104
Wyoming	1,360	115	113	122	136
U. S. (total)	785,599	99	101	105	110

Source: U.S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1956 through 1962) and *A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education* (Fiscal year 1964).

* The base year is 1955-56 (index = 100).

TABLE 39

EXPENDITURES* FOR VOCATIONAL AGRICULTURE IN MONTANA, 1954-55 THROUGH 1963-64

School year	Amount	Index**
1954-55	$299,338	100
1955-56	325,499	109
1956-57	338,618	113
1957-58	351,417	117
1958-59	339,200	113
1959-60	326,876	109
1960-61	327,933	110
1961-62	325,217	109
1962-63	334,606	112
1963-64	358,521	120

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1955 through 1962); U.S. Office of Education, A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1954-55 used as base year (index = 100).

period shows a 20 per cent increase. The costs for the intervening period were relatively stable, five years having increases and three having decreases, with the indexes ranging from 109 to 117 compared with the base year (1954-55).

Expenditures for vocational agriculture in the 11 Western states for certain years are shown in Table 40. The overall picture is one of increasing costs over the base year (1955-56). The indexes for the last year shown (1963-64) reveal all the other states to be above Montana. Arizona had an increase of 54 per cent. Eight of the 11 states show increases each of the four years for which indexes have been computed.

The small enrollment growth in Montana is readily attributable to the relaxation of requirements for participation in the program and to the broadened objectives which include training for off-farm agricultural occupations. It was found, however, through interviews with local school personnel, that many students are enrolled who have not yet made any kind of occupational choice and are using the program to explore and examine varying occupational interests. In this context of purpose, it must be assumed that many students reported as "vocational students" are taking the courses as "prevocational" or as "vocational exploratory" and should not be considered as bona fide vocational agriculture students. This was a prevalent situation found in the 19 schools which were visited by the writer and points up the desirability of a depth study of the potential utilization of vocational agriculture and other vocational offerings in relation to a vocational guidance program for all students.

There is a total of 61 teachers of vocational agriculture presently employed in the 60 agriculture departments of the State. Thus, only one department is served with two fully qualified and certificated instructors. There are other departments in the State, however, in which part-time specialists are used, particularly for certain phases of the agricultural

TABLE 40

EXPENDITURES* FOR VOCATIONAL AGRICULTURE IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT EXPENDITURES, BY ALTERNATE YEARS, FOR 1957-58 THROUGH 1963-64

State	Expenditures 1955-56	Index** of expenditures			
		1957-58	1959-60	1961-62	1963-64
Arizona	$ 271,812	114	118	128	154
California	2,298,511	103	110	115	124
Colorado	355,668	105	115	125	131
Idaho	400,721	112	121	130	139
MONTANA	325,499	108	100	100	110
Nevada	94,386	112	116	120	141
New Mexico	365,364	113	109	112	122
Oregon	500,963	117	124	130	146
Utah	319,556	101	109	116	148
Washington	928,691	109	111	119	124
Wyoming	245,142	155	155	131	143
U. S. (total)	$ 56,194,791	114	119	130	137

Source: U. S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1956 through 1962) and *A Review of Activities in Federally Aided Programs* [of] *Vocational and Technical Education* (Fiscal year 1964).

* Exclusive of expenditures for vocational guidance.

** The base year is 1955-56 (index = 100).

mechanics portion of the curriculum where special training and/or experience is necessary. This is a commendable practice and should be encouraged in other agriculture curriculum areas where special knowledge of the subject matter is required or desirable.

Physical facilities are but a means to an end, but for vocational agriculture they are an important means for effective instruction. Individual instruction for students whose programs are based on a farm-and-home plan requires an extensively developed library for study and research of problems and situations attendant to each plan. For students whose objectives may be agribusiness or off-farm agricultural occupations, the library must afford the opportunity to examine and study the many related aspects of agriculture.

Agriculture mechanics shops and equipment should provide the opportunity to develop those skills and habits required by employers and essential for the proper operation and maintenance of machinery and equipment used in the industry. Basic skills in electricity, gasoline and diesel motors, metals, welding, construction, and other general mechanics areas will have a carry-over to more specific and highly developed skills when the student might be called upon to perform them.

The classrooms and laboratories should provide the environment for other learning experiences which aid in the fulfillment of the student's vocational objectives. Innovations in physical facilities are just as important as innovations in teaching techniques or in any other aspect of the instructional program.

The respondents to the questionnaire rated their facilities, and a summary of these responses is presented in Table 41. The majority consider the facilities to be fairly adequate for instructional purposes, and there were more who reported having superior facilities than reported having inferior facilities.

TABLE 41

APPRAISAL BY VOCATIONAL AGRICULTURE TEACHERS OF FOUR IMPORTANT ASPECTS OF VOCATIONAL AGRICULTURE PROGRAMS

Question	Response	Section of the State					Total	
		Eastern	North-central	South-central	South-western	North-western	No.	%
How do you rate your facilities for instruction implementation?	Very adequate	2	1	4	2	3	12	24
	Fairly adequate	9	7	9	2	3	30	59
	Inadequate	2	1	1	1	2	7	14
How do you rate the State preservice and inservice teacher training program for vocational agriculture teachers in terms of current day needs?	Very adequate	3	2	1	2	--	8	16
	Fairly adequate	8	5	11	3	6	33	65
	Inadequate	2	3	2	--	2	9	18
How do you rate the supervisory service of the State office in relation to local programs of vocational agriculture?	Very adequate	--	3	3	1	1	8	16
	Fairly adequate	6	4	8	3	1	22	43
	Inadequate	7	2	3	1	6	19	37
How well is your program meeting the needs of the entry worker in today's agriculture industry?	Very well	3	1	3	--	--	7	14
	Fairly well	8	7	10	5	8	38	75
	Poorly	--	1	1	--	--	2	4

Source: SCHOOL SURVEY SERVICE questionnaires.

Table 41 presents also the responses of these agriculture teachers to two other questions of importance to the effectiveness of the programs in the State. The large majority of the respondents indicated that both the preservice and inservice teacher training programs in vocational agriculture are either very adequate or fairly adequate. There are, however, a sizable proportion who gave the rating of "inadequate." While about one-sixth of the respondents rated the supervisory service of the State office as "very adequate," the remainder were almost equally divided between the ratings of "inadequate" and "fairly adequate."

Each local department of vocational agriculture in Montana develops its own vocational agriculture curriculum within the framework of a general curriculum guide provided by the State. In most departments the course of study is divided approximately equally between agricultural science and agricultural mechanics, particularly in the senior year.

The local programs vary in length from three to four years. Most common at the time of the survey was the four-year program. Curriculum content and course materials are developed on a graded basis which begins with basic knowledge and understanding in agricultural science and basic skills in agricultural mechanics and then advances progressively to the more difficult areas of knowledge and skills. The limited emphasis which is put on agribusiness and off-farm agriculture-related occupations is generally reserved for the senior year and then through the mechanics phase of training rather than through the science phase.

The opinions about the last question in Table 41 would indicate that almost 90 per cent of the teachers responding to the inquiry believe their agriculture program is doing at least an average job in meeting the needs of entry workers for both on-farm and off-farm agricultural occupations.

In Table 42 are shown the responses to two questions related to the scope of the respondent's agriculture program and to two questions dealing with local procedures. From the responses to the first question, it can be seen that fewer than one-fourth of these instructors indicated any regular agriculture classes are provided for the out-of-school youth.

TABLE 42

RESPONSES OF THE VOCATIONAL AGRICULTURE TEACHERS TO FOUR QUESTIONS RELATED TO THEIR PROGRAMS

Question	Response	Section of the State					Total	
		Eastern	North-central	South-central	South-western	North-western	No.	%
Do you regularly provide agriculture classes for out-of-school youth (graduates as well as for those who did not complete high school)?	Yes	4	1	3	--	3	11	22
	No	9	7	10	5	5	36	72
Do you regularly provide classes for adult farmers?	Yes	10	4	10	3	4	31	61
	No	3	6	4	2	3	18	35
Do you maintain a follow-up record on students who graduate from your vocational program?	Yes	10	5	13	4	5	37	73
	No	3	5	1	1	2	12	24
Do you have an active lay advisory committee for your program?	Yes	1	1	4	3	2	11	22
	No	12	9	10	2	5	38	75

Source: SCHOOL SURVEY SERVICE questionnaires.

Teachers generally feel they are doing much more for adult farmers than they are for the out-of-school youth, but even in this area (according to questionnaire responses) nearly 35 per cent of the respondents provide no opportunity for the already employed agricultural worker who might be in need of further training or upgrading. The majority of adult classes offered by vocational agriculture departments in Montana are in mechanics areas, mostly welding. This is not sufficient to meet the needs of an industry affected by radical change.

The holding power of a vocational agriculture program is somewhat indicative of its worth, but more important it is a major factor in achieving the occupational objectives of its enrollees. Since all programs are structured on either a three- or four-year basis and since the curriculum is sequentially developed for educational growth, the per cent of students completing the full curriculum is very significant in an evaluation of a program. Following is a summary of the responses of these agriculture teachers regarding the per cent of their beginning students who complete the full program in agriculture.

Per cent of first-year students who complete all years	Number of respondents to the questionnaire
90 per cent and over	6
80-89 per cent	6
70-79 per cent	8
60-69 per cent	10
50-59 per cent	6
40-49 per cent	3
30-39 per cent	3
Fewer than 30 per cent	5

It is encouraging to note in Table 42 that almost three-fourths of these respondents indicate that they maintain follow-up records for the graduates of their vocational agriculture programs. Such records should provide lists of potential students for the classes for out-of-school youth and for adult farmers. Moreover, these persons can be of great help in the continuing improvement of the high school program. Likewise, some of the former students might well serve on a lay advisory committee. Such committees can be of great value to any vocational program, but, according to questionnaire responses, only about one-fourth of the Montana agriculture teachers report having an active lay advisory committee for their programs.

Teachers of vocational agriculture in Montana were asked to indicate the most significant changes in curriculum content or emphasis within the last five years. Following are excerpts from statements submitted:

> "More emphasis on farm mechanics phases such as motors and electricity"
>
> "More emphasis on semester units, especially welding, small motors, building construction, management, and leadership"
>
> "More block subject programming instead of integrated material"
>
> "Emphasis on agribusiness and on leadership"
>
> "Have tried to cover few areas but have done a more intensive job with those covered"
>
> "Addition of ag-related units"

"Added small engines and arc and acetylene welding to farm mechanics phase"

"Increased emphasis on shop skills"

"Inclusion of off-farm occupations and agribusiness; a major emphasis on machinery and mechanics, development of an active and functional FFA organization"

Below is a summary of the responses made by these agriculture teachers when asked to indicate the position of the person(s) involved in the development and/or revision of the local vocational curriculum.

Position of the person(s)	Number of respondents
Vocational agriculture instructor only	8
Vocational agriculture instructor jointly with others	21
Principal and/or superintendent	22
Vocational counselor	2
Advisory Council	5
School Board	2
Curriculum Coordinator	1
Teacher training staff at MSU	6
Ranchers, farmers, and industry representatives	2
Agriculture Teachers Association and State Course of Study Committee	3

It can be noted that the above listing totals more than 51, the number of respondents to the questionnaire. This is due, obviously, to the cases in which the curriculum development was the work of more than one person. The entries above, however, indicate the number of times each was mentioned by the respondents.

It is apparent from the data shown above that the vocational agriculture curriculum is being developed by professional educators without any appreciable involvement of those other persons who have a concern for how well a student is prepared for employment in agricultural occupations. Perhaps if wider use were made of a lay advisory committee in the conduct of the local program, there would be a greater degree of desirable involvement of the "public."

A strong feeling was expressed by administrators that the high school vocational agriculture curriculum must undergo major changes. As one administrator expressed it, "A new curriculum emphasis is essential for the survival of vocational agriculture. The traditional agriculture program in the high school is passé. There must be new direction, new concepts, new methods, and a broader set of purposes and objectives."

Success in most any activity is dependent upon the cooperation of many people and upon the favorable attitudes of even more persons. In order to secure some indication of the attitudes of others to the vocational agriculture program in the State, the questionnaire respondent was asked to indicate what he considered the attitudes of certain groups to be. Table 43 shows the summary of their responses to this question. The respondents report very good attitudes on the part of school administrators and members of farm organizations. Obviously, from the responses there is a need for improvement in the attitudes of the other teachers in the schools and of the pupils in other programs.

The support accorded programs of vocational agriculture by local Montana administrators is far above the average noted by the consultant in other parts of the nation. The support, generally, is not passive but demonstrates a genuine concern that the education and training

TABLE 43

RATINGS BY THE VOCATIONAL AGRICULTURE TEACHER RESPONDENTS OF THE ATTITUDES OF CERTAIN SCHOOL AND COMMUNITY GROUPS REGARDING THE VOCATIONAL AGRICULTURE PROGRAM

Group	Per cent of respondents indicating				
	Good	Indifferent	Poor	Unknown	No response
Farm organizations	82	8	--	--	10
Agribusiness organizations	75	14	--	6	5
Local business and industry	65	20	4	6	5
Parents in general	68	22	6	--	4
Local school administration	82	12	4	--	12
Other teaching personnel	44	48	--	--	18
Other students in the school	36	52	2	2	8

Source: SCHOOL SURVEY SERVICE questionnaires.

needs of youth served by the program will be met to the fullest measure possible. It is recognized by most administrators that the majority of high school graduates will not and should not pursue a program of higher education leading to a baccalaureate degree; however, it is further recognized that the high school program of vocational agriculture, or any other curriculum, cannot be terminal in preparing youth for the world of work. Accordingly there is practically unanimous feeling that there must be "something beyond high school" for "ag" students, as well as for others who plan to enter employment in an occupational area.

The relationship between the State Supervisor of Vocational Agriculture and the Agricultural Education (teacher training) staff at Montana State University is very good. In neither case is the size of the staff big enough to result in any serious problems; and in each situation, the head of the service has been in the position for less than six months. Little opportunity has existed for the two staffs to work together; however, there is evidence that good rapport has been established, that there is an understanding of each other's functions and responsibilities, and that there is expressed and demonstrated interest in closely coordinated effort between the agencies.

Post-Secondary Education in Vocational Agriculture

Under the Vocational Education Acts preceding the Act of 1963 (P.L. 88-210), instruction in vocational agriculture was authorized for in-school (high school) youth and for out-of-school young farmers and adult farmers. Under the Vocational Education Act of 1963, the purpose for which Federal grants to States are authorized was broadened "so that persons of all ages in all communities of the State - those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special education handicaps - will have ready access to vocational training or retraining which is of high quality, which is realistic in light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."[4] Thus, it can be seen that vocational education in agriculture, or any other field, must be extended far beyond the high school if its intended purpose is to be fulfilled.

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[4] Sec. I, Vocational Education Act of 1963 (P. L. 88-210, Part A).

The Montana vocational agriculture program offers very little for the purpose of developing new skills or upgrading old ones to either out-of-school youth (those who have completed or dropped out of high school) or to adults already employed. The exception is in the limited number of adult farmer classes offered essentially in the area of mechanics. As new techniques evolve in the agriculture production field and as new knowledge is discovered which relates to production, there exist the demand and need for adult training programs to make application of them. At the same time, there are the emerging new jobs in off-farm agriculturally related areas, many of which require special skills and knowledge that can best be acquired through systematic and organized programs of training.

Studies by the Upper Midwest Research and Development Council show that agricultural employment in Montana fell by 3,800 from 1960 to 1965 and is projected to fall by another 7,800 by 1975. The agricultural employment figures include self-employed operators and family workers as well as hired labor.[5] The obvious method by which many of these displaced workers may become re-employed is "re-training." It would seem logical that the background of many of these people would dictate that they enter off-farm agriculture-related jobs. The need for a broad program of adult education is apparent.

The instructor is the key factor in a successful and effective program of vocational agriculture. His background of experience, his preservice preparation and his inservice training are reflected in the quality of his instructional efforts and in the product of his teaching. The vocational agriculture teacher needs a background in the field of agriculture - in either production or in related areas. He needs to keep currently abreast of agricultural practices and be knowledgeable of those conditions and situations affecting the social and economic status of the industry. It is important that he maintain effective working relationships with other agricultural and educational agencies in the community, particularly the agricultural extension service and other agencies performing any organized training or service function to farmers and farm-related people.

To be qualified in all areas where special skill and knowledge are required demands a thoughtfully conceived and cooperatively planned program of preservice training, followed by an ongoing program of inservice training based on current and anticipated situations which bear on the agricultural industry.

In answer to the question, "How well did your preservice teacher training prepare you for your job as a teacher of vocational agriculture?" about 50 per cent of those interviewed thought it was adequate at the time but that it is now obsolete. About 50 per cent felt that too much emphasis was placed on subject matter and teaching methodology and not enough emphasis on how to relate the program to local needs and changing conditions. The implication was the preservice teacher training must adjust to the "new agriculture" which is emerging.

The same group of instructors was asked, "How well is the program of inservice teacher training serving your needs?" The response was basically a negative one as far as any local or sectional help is concerned; however, there are occasional outlines prepared and mailed, dealing with additional course content. An obvious need was expressed for more assistance with the identification of emerging occupations, teaching materials relating to them, and techniques of training for them. A strong feeling prevailed that district or regional inservice teacher training workshops must be conducted to develop competencies for teaching agribusiness and the agriculture-related occupations. Teaching aids must be provided and a materials laboratory would be most desirable.

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[5] Great Falls Tribune, Thursday, October 19, 1967. Editorial, "Farms Lose Jobs; Government Gains."

A proposal has been made by the Agricultural Education staff of Montana State University to add a new teaching minor to their program; namely, Agriculture Business Education. The summary of need for this new minor is as follows:

1. To satisfy a growing need for teachers other than those for agriculture production areas at the high school, post-high school, and adult levels

2. To meet the employment demands for more trained persons in today's increasingly specialized agriculture

3. To lead in the trend of converting production agriculture programs to off-farm agricultural education at the several educational levels

4. To train manpower at the several educational levels so that they are more employable in the agricultural technological revolution

5. To organize a preservice teacher preparation program for the evolving area of off-farm agriculture occupations

6. To meet the post-high school demand for teachers resulting from an expansion of area schools and community colleges

7. To expand current adult education programs into nonproduction agriculture areas, thereby serving a whole new segment of agriculture

8. To increase employment possibilities of college graduates

9. To continue in the trend of other universities and colleges which have already established such a program [6]

During the 12-year period 1956-1967, the Agricultural Education Division of Montana State University has graduated 178 students qualified as teachers of vocational agriculture. Of this total, 90 were placed as teachers, mostly in the State, while the balance, or approximately 50 per cent, entered other areas of employment, went into the Armed Services, or continued their education. Table 44 indicates some tendency of agriculturally trained professional personnel to move into nonteaching agribusiness and nonfarm agricultural occupation areas.

Attitudes of Montanans Toward Vocational Agriculture Education

In general school administrators look upon their programs of vocational agriculture with concern, rather than with conviction that any real occupational objective is being realized. There is a strong feeling among administrators that vocational education is a major need of a great number of high school students and that vocational agriculture should be the choice of many of them. At the same time, however, very few administrators believe the high school vocational agriculture program can be terminal, or should purport to be, except for a few isolated individuals. The same attitude appeared to be held toward all high school programs of vocational education, with the exception of some areas of business education.

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[6] A Rationale and Prospectus for Establishment of a Minor in Agriculture Business Education submitted to Dr. Johan Asleson and Dr. Lark Carter by Max L. Amberson and H. E. Rodeberg.

TABLE 44

AGRICULTURAL EDUCATION JOB PLACEMENT, 1956 THROUGH 1967, BY MONTANA STATE UNIVERSITY AGRICULTURAL EDUCATION JOB PLACEMENT*

First job placement	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	Total
Vo-Ag instructor	8	9	10	5	8	6	7	6	7	10	4	10	90
Armed Services	6		2	4	3		1		3		1	1	21
Farming or ranching			1	1	4			1	1				8
Graduate work	3	2	3	1			2	1	1	1			14
Extension	1	3	1	1			1			1	1	2	11
Soil Conservation Service			2	1	2	1						1	7
Other teaching .	2	1		2	1								6
Agriculture business	1			1	2					3			7
Farmers home administration	1						2	1	1		1		6
Ministry					1								1
Reclamation		1											1
Agricultural stabilization and conservation					1						1		2
Peace Corps							1			2			3
Other												1	1
Total	22	16	19	16	22	7	14	9	13	17	8	15	178

Source: Montana State University, Agricultural Education Division.

* Placement is defined as a student's first job upon graduation.

There is general consensus that high school vocational agriculture programs should be exploratory and serve to prepare the student for specialized, skilled, or technical training in agriculture or agricultural-related occupations in an area school, community college, or other type of post-high school program. The attitude also prevailed that the high school vocational agriculture program should accommodate many students for the purpose of acquainting them with certain aspects of the world of work and particularly to provide the opportunity to develop some basic skills in mechanical areas.

A significant number of administrators believe the present program of vocational agriculture is not compatible with the current and future needs of the agriculture industry. They feel there has been no real State leadership given to modernize and update the programs. Change, innovation, new direction, new emphasis, revolution, involvement, work experience, cooperative part-time training, research, and leadership were terms frequently used by administrators to describe the needs in secondary school programs.

In general, the teachers of Vocational Agriculture recognize the need for improvement in instruction, a broadening of the agriculture curriculum base, more generalization and less specialization in the instructional program, and a strong emphasis on agricultural occupations and agribusiness. The majority of them regard the in-school program as their major responsibility, with apparently very little concern for out-of-school youth and adults. Approximately 40 per cent devote their program exclusively to high school students. The position of teachers toward out-of-school and adult classes reflects, in large measure, the attitude of administrators.

A serious concern is shown among vocational agriculture teachers for the education and training needs of those persons who will enter off-farm agriculture-related occupations and the agribusiness field. There was an expressed need for much help with guidelines, occupation identification, occupation description, curriculum development, teaching plans, etc. Most teachers feel that a beginning can and should be made at the high school level in this new area of agricultural education, but most of the specific training must be done at the post-high school level through institutions other than the high school.

Teachers of vocational agriculture were very verbose in expressing their attitude toward the supervisory services of the State Office in relation to local programs. More State supervisory service is needed and wanted. Closer ties are sought between the State Office and teachers in the field. Help is needed with the improvement of instruction, program evaluation, community studies and surveys, promotion, the local program of public information, and other areas to which teachers should devote some of their effort. Communication is poor, coordination is lacking, and leadership is weak. More manpower in the State Office was repeatedly expressed as the most urgent need for the State's vocational agriculture program.

Vocational agriculture is still regarded by most lay agricultural people in the traditional concept of preparing people for the work of the farm - production agriculture. There is little awareness that vocational agriculture is doing anything for adult farmers and even less that it is moving into the area of off-farm occupations and agribusiness training. There is a desire to know in greater detail what is being done, changes that are taking place, and new emphases that are being given.

Nine lay leaders in agriculture business and industry were asked by the writer to respond to the questions: (a) How adequately do you believe vocational agriculture is meeting the pre-employment training needs of beginning workers in on-farm and off-farm agricultural occupations? and (b) How adequately do you believe it is meeting the training requirements of persons already employed in agricultural occupations who are in need of further training and upgrading? The following is a summary of their responses:

Adequacy of	Number of respondents
(a) Pre-employment training needs:	
Very adequate	1
Partially adequate	5
Inadequate	--
Don't know	3
(b) Already employed workers:	
Very adequate	--
Partially adequate	2
Inadequate	3
Don't know	4

Although the sampling of responses to the above questions is small, the responses would indicate that many people who should be informed about the program are not.

Several lay leaders stated a belief that vocational agriculture education in Montana is operating in a vacuum. There is a lack of cooperation and coordination. Communication between vocational agriculture leaders and the business community does not exist. School administrators and vocational agriculture personnel need to explore with business and industry the opportunities for occupational placement and the attendant training programs needed.

CHAPTER 3*

HOME ECONOMICS EDUCATION

Before the passage of the Vocational Education Act of 1963 (P. L. 88-210), education for homemaking and family life was the major focus of vocational home economics education. Many home economists believe this will continue to be the major purpose because of the importance of the family as a basic institution in our society. Bernice Milburn Moore stated this belief when she said:

> Families of this nation differ widely and do have a vast variety of needs. But families in every subculture are forever. Through them infants become persons; culture is transmitted from generation to generation; and the ongoing of life is assured. What the quality of life will be depends in no small measure on how schools assume their responsibilities for making families more effective through education relevant to all and at the same time adapted to each subculture and its needs.[1]

With the passage of the Vocational Education Act of 1963, preparation for gainful occupations related to the skills and abilities of home economics education became the second purpose of vocational home economics. The Act was passed during a period of high unemployment and underemployment and at a time when Congress was concerned with rising juvenile delinquency, school dropouts, and the lack of occupational opportunities for unskilled workers.

That home economics has a responsibility toward occupational preparation is evident from the following facts compiled by Peggy Dewar:

> Youthful job seekers often experience difficulty in finding jobs when they are not prepared for a specific occupation or career.
>
> An economy cannot remain a healthy one if it consistently has too many unemployed individuals, and women workers are essential to the maintenance of an expanding economy.
>
> By 1970 two out of three women will be wage earners.
>
> It is essential that we develop ways to help women meet the situations they face today - their multiple roles, their need to provide supporting and supplementary income, their longer life expectancy.

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*Written principally by Genevieve Pieretti.

[1] Bernice Milburn Moore, "Families of America," _The Bulletin of the National Association of Secondary School Principals_, December, 1964, p. 14.

Families are willing to pay for and use the services of trained persons from the community to perform household tasks.

With the increasing number of women assuming the dual role of homemaker and wage earner, mothers often need to have persons to assist them with the care of the home, with clothing maintenance, with meal preparation and service, and with the care of children.

Longer life expectancy indicates a greater need for persons to be trained to serve elderly citizens as companions, shoppers, or housekeepers either on a full- or part-time basis.

More often than in the past individuals and families get their meals in public facilities away from the home.

Home economists in education are in a position to alert young people and older women to the opportunities available to them to work in the occupations related to and requiring the knowledge and skills of home economics.[2]

Criteria for a Good Program of Home Economics Education

The criteria used as a basis for evaluating the State and local programs of vocational home economics in Montana evolved from a study of recent publications and leadership conferences regarding the functions of state departments of education; the Montana State Plan for Vocational Education; Criteria for Occupational Education Programs in Nevada; The Evaluative Criteria for Home Economics, 1960 edition, of the National Study of Secondary School Principals; the job descriptions of the State staff; and the personal knowledge of the writer derived from her own 17 years of experience as a state supervisor.

A. State level

1. The State Plan provides adequate guidelines for the operation of the home economics education program.

2. A state staff is maintained with the personal and professional qualities needed to provide leadership for the program. Work loads are reasonable, and working conditions are favorable. The salaries and other financial benefits are commensurate with qualifications to attract and maintain qualified home economics leaders at the state level.

3. The total state program of home economics education is cooperatively planned, implemented, and evaluated by supervisors, teacher educators, teachers, and others concerned with the program. It is based on clearly defined long-time goals with an annual program of work based on needs and priorities.

4. The work of the home economics supervisory staff is coordinated with that of other supervisors in the vocational education division.

5. The state department of education makes available adequate standards and guidelines as well as curriculum and evaluation materials for teachers and

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[2] Peggy Dewar, "How May Home Economics Teachers and Teacher Educators Contribute to the Total Occupational Education Emphasis?", Illinois Teacher, Volume X, No. 2, Fall, 1966-67.

administrators. The characteristics of an effective vocational program are defined and clarified; opportunities for flexibility and choice are provided.

6. The state staff believes that the most important single factor in the teaching-learning situation is the teacher. Because of this, high priority is given to preservice and to inservice education. Provisions are made for meeting the varied educational needs of teachers. The inservice program is cooperatively planned and evaluated with teachers in order that it may be most responsive to teacher needs.

7. A sufficient number of qualified teachers is being prepared to meet the needs of the state for teachers of secondary, adult, post-secondary, and special needs classes. Certification requirements are such as to allow for teachers from areas related to home economics and teachers from business and industry to teach some homemaking classes for adults and programs for gainful employment at the various levels.

8. Seeking new and better methods, materials, and subject matter is provided through a program of research and pilot programs. Promising individuals are encouraged to continue advanced study and to pursue a research problem. Attention of teachers is called to studies which have particular meaning for them.

9. Service to the state is provided through a variety of methods. Services are extended to both vocational and nonvocational programs and to teachers and administrators of the day-school, adult, and post-secondary programs. Services are based on the needs of teachers and the needs of the state and have sufficient depth to provide some impact on the major objectives of the program.

10. Guidance is provided by the state staff to state officers and advisers of the Association of Future Homemakers.

11. The state supervisors cooperate with other agencies or groups in statewide activities that have definite value for vocational education.

12. Provision is made in the annual program of work for interpreting the home economics program through a variety of media.

13. Reporting by schools is kept to a minimum but is adequate to keep records needed for Federal reports and for a history of the growth and development of the home economics program.

14. Funding for home economics education programs is adequate for the strengthening and improving of existing programs as well as for expansion and new programs.

B. Local level

1. Home economics programs have shown a steady growth throughout the years and are accessible to and serve the needs of the following groups for homemaking education and/or for gainful employment: secondary, adult, post-secondary, and persons with special needs.

2. Physical facilities of home economics departments, including furnishings and equipment, supplies, and learning resource materials, are adequate for high quality instruction. The learning environments are such that they would attract students to the program.

3. High quality instructional programs are offered:

   (a) to provide instruction which will enable families to improve the quality of their family living through more effective development and utilization of human and material resources

   (b) to train for gainful employment in occupations which utilize the knowledge and skills of home economics

   Home economics teachers feel adequately prepared to teach all areas of the home economics program.

4. Homemaking education programs meet the general characteristics or requirements as described in the state department of education publications.[3] The scope of the secondary and adult homemaking education program is broad and deals with the fundamental values and problems in the several aspects of home living and homemaking such as family relations, child development, clothing and textiles, foods and nutrition, housing, and management of resources. Homemaking programs are based on the interests and needs of the students in their homes and in their communities. Changes in society are considered in program planning, and the needs of all students are considered.

5. Home economics programs for gainful employment meet the characteristics and standards as described in the State Plan.

6. Home, community, and FHA experiences are encouraged as a means of applying classroom learnings to the home and community.

7. Home economics teachers keep the community informed in regard to the purposes and achievements of the home economics program.

8. Administrators, parents, and other adults understand and support the home economics program.

Procedures Used in the Survey

The survey of home economics education in Montana was conducted by means of interviews, questionnaires, school visits and observations, and analyses of records and reports.

Questionnaires were sent to all Montana day-school home economics teachers, including both vocational and nonvocational teachers. In Table 45 are shown the number sent and the number returned by the several subgroups.

Table 46 shows the colleges from which these respondents were graduated and their years of teaching experience. Almost two-thirds were graduates of Montana institutions. The median experience in teaching home economics is 4-5 years.

Questionnaires were sent also to a total of 174 key homemakers in Montana. Two of these were returned unopened because of inadequate address; but of the remaining 172, there were 89 questionnaires, or 52 per cent, which were completed and returned. Table 47 shows by five sections of the State the number sent and returned.

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[3] For Montana these would be the State Plan for Vocational Education and Vocational Home Economics Education - Planning for Effective Teaching (October, 1967).

TABLE 45

NUMBER OF QUESTIONNAIRES SENT TO AND RETURNED BY HOME ECONOMICS TEACHERS

Group of teachers	Number of questionnaires		Per cent returned
	Sent	Returned	
Vocational:			
(a) High school	74	46	62
(b) Junior high school	7	5	72
Nonvocational public:			
(a) High school	66	35	53
(b) Junior high school	25	17	68
(c) Elementary	14	7	50
Other (Private and State)	13	8	62
Total	199	118	59

Source: Survey Office records.

TABLE 46

COLLEGES FROM WHICH THE HOME ECONOMICS RESPONDENTS GRADUATED AND THEIR YEARS OF TEACHING EXPERIENCE

Item	Respondents from		Total	
	Vocational schools	Other schools	No.	Per cent
College of graduation:				
Montana State University	28	22	50	42
University of Montana	10	16	26	22
Northern Montana College	--	1	1	1
Located in neighboring states	3	6	9	8
Located in other Western states	5	5	10	8
Located elsewhere	5	14	19	16
Number of years of teaching experience:				
(a) As a home economics teacher:				
One year	4	14	18	15
2-3 years	12	13	25	21
4-5 years	9	7	16	14
6-10 years	8	16	24	20
11-15 years	12	10	22	19
16-20 years	4	2	6	5
More than 20 years	2	2	4	3
(b) As an elementary teacher:				
1-5 years	5	5	10	8
6-10 years	1	5	6	5
11-15 years	--	2	2	2
More than 15 years	--	3	3	3
(c) In other teaching jobs:				
1-5 years	9	16	25	21
6-10 years	4	3	7	6
More than 10 years	--	2	2	2

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 47

NUMBER OF QUESTIONNAIRES SENT TO AND RETURNED BY KEY HOMEMAKERS

Section* of the State	Number of questionnaires		Per cent returned
	Sent	Returned	
Eastern	27	14	52
Northcentral	18	12	67
Southcentral	14	7	50
Southwestern	47	24	51
Northwestern	66	32	49
Total	172	89	52

Source: SCHOOL SURVEY SERVICE questionnaires.

* These sections are not identical with the five areas recommended in Chapter 8.

Questionnaires were sent also to 53 nursing or retirement homes. One of these was returned marked "undeliverable." Of the remaining 52, there were 22 (or 42 per cent) returned to the Survey Office. In Table 48 are shown, by sections of Montana, the numbers sent and returned.

TABLE 48

NUMBER OF QUESTIONNAIRES SENT TO AND RETURNED BY NURSING OR RETIREMENT HOMES

Section of the State	Number of questionnaires		Per cent returned
	Sent	Returned	
Eastern	8	5	62
Northcentral	11	2	18
Southcentral	13	6	46
Southwestern	10	5	50
Northwestern	10	4	40
Total	52	22	42

Source: SCHOOL SURVEY SERVICE questionnaires.

Interviews and small group conferences were held with six persons in the State Department of Public Instruction; 31 day-school and adult teachers of vocational and nonvocational schools; 35 principals, superintendents, and other local school administrators; four teacher educators and heads of home economics departments in the two universities which prepare home economics teachers; four community college administrators; and 45 lay citizens, employment service directors, and employers of persons in service occupations related to the skills of home economics.

State Department descriptive and statistical reports and curriculum bulletins were reviewed. Surveys which had been made by local school districts with the assistance of the Research Coordinating Unit were also reviewed. The State Health Department provided some statistics.

An important part of the survey was the actual visits to a sample of Montana schools conducting home economics programs. On these visitations impressions were formed of buildings and facilities; equipment, supplies, and instructional materials; program planning; and other aspects of home economics education.

Historical Background of Home Economics - Montana's Early Beginnings

Since the inception of the Smith-Hughes Act in 1917 and Montana's acceptance of the Act that year, Montana has had a vocational education program in home economics. Three schools took part in the program that year, and since that time there has been a steady growth.

Although records of early programs are missing in State Department files and in the Montana State Library, an interview with one of Montana's early home economics teachers, Miss Sadie Bryson of Helena, provided some of the information which follows.

Early programs, she said, were concerned with helping students plan a well-developed home. A great deal of time in the program was given to planning and preparing well-balanced meals. Preparation of bread and rolls was emphasized. Since there were no "convenience foods" in those days, much emphasis was placed on achieving quality products. The making of jams and jellies and preserves was a recognized part of the program.

Sewing was popular then as it is today. Garments commonly made were slips, underwear, pajamas, and dresses. Housekeeping was emphasized, also, but little was taught concerning housing or home furnishings. Some emphasis on child care and family relationships was included. A few boys took part in the program, mostly through exchange classes with other vocational services. Home projects were an important aspect of the program.

Later home economics programs in Montana built upon these early beginnings. Throughout the years home economics has made an effort to meet the changing needs of society. Depression years found home economics programs emphasizing clothing renovation and furniture made from apple boxes, orange crates, and nail kegs. Canning "Victory Garden" produce and cooking without sugar were popular topics during World War II days.

In the 50th anniversary issue of the American Vocational Association Journal, Alberta D. Hill, Head of the Home Economics Education Department, Iowa State University, had this to say about the history of vocational home economics:

> Vocational home economics programs have yielded to the influences of the current and popular views of educators and politicians as well as to the influences of social, technological, and economic conditions.
>
> We have kidded about the orange-crate furniture and the 'meat extender' dishes which were found in homes during the 1930's. But, we are proud of the contributions home economics teachers made by teaching skills needed to help homes fulfill their functions during the depression years.
>
> Teachers of early World War II days accepted the role of improving the nutritional status of the nation and preparing for disaster through training such as 'home nursing.'
>
> We look with satisfaction at the innovative ways found to contribute to solutions of problems of poverty.
>
> The peaks of concern for consumers in our country have been reflected in parallel emphasis on consumer education in home economics. Fifty years of experience in adapting!

> Adaptation to fundamental change is essential, but programs may have been, at times, too responsive to popular trends. Fifty years of experience proves the need for constant vigilance in distinguishing between sound bases for change and cyclical changes in style. We must distinguish between new educational methods based on responsible research and the popular techniques which wax and wane like lengths of skirts; between emphases needed by social and economic conditions and emphases which merely reflect oscillating public opinion.[4]

The Home Economics Program at the State Level

The following evaluation of the home economics program in Montana is given in terms of the criteria previously stated; each criterion, however, is repeated at the beginning of each evaluation.

1. The *State Plan* provides adequate guidelines for the operation of the home economics education program.

The Montana *State Plan* has set up minimum standards to meet the requirements of the Federal acts. Provisions pertaining to home economics are flexible and usable. The very nature of the *State Plan*, which is a contract between the state of Montana and the Federal government, makes it somewhat difficult for local school administrators and teachers to locate provisions relating to each of the services. Therefore, development of a policy bulletin is needed as a resource for teachers and administrators in planning programs at all levels. The need for such a bulletin was brought to the attention of the writer since, almost without exception, the teachers and administrators who were interviewed did not know the requirements for reimbursed programs.

2. A state staff is maintained with the personal and professional qualities needed to provide leadership for the program. Work loads are reasonable, and working conditions are favorable. The salaries and other financial benefits are commensurate with qualifications to attract and maintain qualified home economics leaders at the state level.

Requirements in Montana for the positions of State Supervisor and Assistant State Supervisor are set at a minimum of a Bachelor's degree with a major in some area of vocational education. Three years of experience as a teacher and/or supervisor of a recognized vocational education program is required.

The Montana supervisors for home economics are well qualified for the positions they hold. Each has a Master's degree and from 8 to 14 years of experience related to her present position. Both have established effective working relations with local schools. Administrators and teachers interviewed by the writer, without exception, were generous in praise of these two staff members.

Although office space for them is crowded with two desks in a small room and with a lack of sufficient storage space for reference materials and supplies, it is an improvement over previous facilities, according to the staff. Salaries are comparable to those of other state supervisors in the Pacific and Mountain states. Although work loads are heavy, supervisors share responsibilities and decide on priorities.

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[4] Alberta D. Hill, "Forward from 50 Years of Experience in Home Economics Education," *American Vocational Journal*, March, 1967, pp. 38-39.

3. The total state program of home economics education is cooperatively planned, implemented, and evaluated by supervisors, teacher educators, teachers, and others concerned with the program. It is based on clearly defined long-time goals with an annual program of work based on needs and priorities.

No evidence of long-time goals for program development were obtained from conferences with the State supervisors. However, the staff is to be commended for re-establishing this year a practice, which has been abandoned for several years, of working with the two teacher educators to set up a program of work for the year with plans for accomplishments. Planning of the State supervisors and the teacher educators would be strengthened if teachers also could be involved in the planning and goal-setting.

Teachers could also be involved in planning annual vocational conferences. In addition, efforts need to be made to involve teachers in activities at the meetings including "Show and Tell" sessions as an opportunity to develop leadership.

In discussing leadership functions of state staff members, William R. Odell of Stanford University has said that one important concern of leaders in attracting followers is that of getting their attention.

> I would say that until you get some kind of identification of a common goal with the people with whom you work, you have no chance at all of affecting them or affecting their actions. So a close identification of your goals and yourself as an individual with other individuals and with the group with which you are working is probably the key to this whole matter of having followers, or of having the potential to be a leader.[5]

At a Leadership Development Seminar for Vocational-Technical Education held at the University of California, Los Angeles, Merle E. Strong, Assistant Director, Division of Vocational and Technical Education, U. S. Office of Education, told of the importance of program planning for vocational education:

> Planning is largely a job of making things happen that would otherwise not occur. Planning is a frame of mind, a new way of looking at problems, a viewpoint rather than a tool or a technique. While it is one of top management's most important responsibilities, it is dependent for success upon the participation of all levels in the formulation of plans and in their execution. Planning as a framework for decision-making is very important, yet it usually runs second in operation in terms of priority; consequently, the administrator who is a doer often gets in a position where he reacts to, rather than influences, events. Comprehensive planning keeps goals and objectives in the forefront and stresses factors involved in reaching them.[6]

4. The work of the home economics supervisory staff is coordinated with that of other supervisors in the vocational education division.

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[5] William R. Odell, "Leadership - Developing the Skills of a Leader," Proceedings of the Conference on The Role of State Department of Education Personnel, Sparks, Nevada, June, 1967.

[6] Merle E. Strong, "Planning a Total Program of Vocational & Technical Education," Final Report, Leadership Development Seminar, Vocational-Technical Education, July 24 - August 4, 1967, p. 36.

Larence Borosage, in an address prepared for a national leadership seminar on home economics education, stated the need for close coordination of all vocational education services as follows:

> Vocational educators must have the capacity and the willingness to see the community and its vocational education needs as a whole rather than a collection of agencies and self-interests. From my own point of view, the day that we could look upon the four areas that have characterized vocational education as separate and discrete is long gone. As we look at the occupational world, what I see increasingly is the occupational man. No longer are occupations going to fit the neat tidy packages into which we have plugged them in the past. In other words, I think people in home economics must work closer with people in trade and industrial education. People in trade and industrial education must work closer with people in agriculture because the nature of the occupational world is such that it demands this kind of relationship.[7]

Many opportunities exist in Montana for cooperation among services. For example, supervisors of home economics education could work with the supervisor in charge of health occupations to analyze ways in which home economics could make a contribution to the preparation for some of the health occupations through a team-teaching effort. The following health areas afford apportunities for cooperation: home health aides, nurses aides, dietician assistants, and companions for the elderly.

Distributive education services and home economics education services could cooperate in programs at the post-secondary level to train for clothing services, fashion merchandising, or fashion trades. Opportunities exist in retail stores for persons with home economics training who are acquainted with textiles, patterns, fabrics, accessories, and apparel for men, women, and children. Opportunities also exist at the secondary school and adult levels for cooperation in merchandising training programs. Many items sold in retail establishments are related to the home and homemaking such as small electrical appliances, household linens, tableware, drapery fabric, and hardware, gift items, and others. Home economists have had a background of experience in teaching consumers how to make satisfying decisions in selecting these and other items for the individual or for the home.

Opportunities exist also for cooperation with distributive education services and trade and industrial education for programs to train workers for the food service industry.

5. The state department of education makes available adequate standards and guidelines as well as curriculum and evaluation materials for teachers and administrators. The characteristics of an effective vocational program are defined and clarified; opportunities for flexibility and choice are provided.

Although guidelines for establishing home economics programs have been released to Montana schools from time to time for the purpose of interpreting _State Plan_ provisions, a major step was taken in 1967 in the development of a bulletin which teachers and administrators can use in program planning at the local level. This bulletin, _Vocational Home Economics Education - Planning for Effective Teaching_, was issued in October, 1967 and introduced to home economics teachers at area meetings throughout the State during October and November.

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[7] Larence Borosage, "A Framework for Program Development," _A National Leadership Seminar on Home Economics Education_, A report, March 28-31, 1966, pp. 29-30.

In 1964 a new curriculum bulletin was published entitled Curriculum Resource Material for Home Economics Education in Montana Schools. This guide was a cooperative effort of Montana home economics teachers and the home economics education staffs at Montana State University, the University of Montana, and the State Department of Public Instruction. In the Introduction, it was stated that "this resource material is tentative and incomplete."

Although the guide was an ambitious and interesting approach to curriculum planning, many teachers interviewed stated they had found it difficult to use. The State Supervisor of Home Economics Education is aware of this and has stated that unfortunately the guide has not been very well accepted. Additional curriculum materials are needed.

In reply to the survey questionnaire item, "How helpful or adequate have you found the homemaking curriculum materials and newsletters from the State Office of Vocational Education?" the following appraisal was given by the responding home economics teachers: 36 per cent said they were very helpful and adequate; 42 per cent, moderately helpful; 6 per cent, difficult to use and confusing; and 8 per cent replied they were uncertain.

All Montana teachers interviewed by the writer stated, however, that the reports of the University workshops which were published and disseminated by the State staff have been very helpful and that these have been used a great deal. This practice of sending the workshop reports to all Montana teachers is to be commended because of the up-to-date curriculum materials provided.

In addition to Montana State Curriculum Guides, a library of guides and resource materials from other states are made available to schools needing assistance on programs for which State guides are not available.

6. The state staff believes that the most important single factor in the teaching-learning situation is the teacher. Because of this, high priority is given to preservice and to inservice education. Provisions are made for meeting the varied educational needs of teachers. The inservice program is cooperatively planned and evaluated with teachers in order that it may be most responsive to teacher needs.

The Montana State Plan charges the State staff with the responsibility for the training of teachers. Teacher education programs at both Montana State University at Bozeman and the University of Montana at Missoula are State approved and reimbursed programs. A graduate program leading to a Master's degree is provided at Montana State University only. Both schools provide summer workshops on timely topics for vocational teachers.

The State supervisors and teacher educators are to be commended for their excellent working relationships. Although major responsibility for the teacher education preservice program rests with the teacher educators, minimum requirements were approved by the State staff to include a balanced program of home economics subjects designed to equip home economics education majors to teach all areas of home economics education. In addition, education courses to meet certification requirements and general education courses including work in art, science, and social studies are required.

Although the preservice programs look satisfactory on paper, close examination of course outlines and teaching methods of the University staff would be needed to determine how well the actual courses are serving the needs of the students training to be teachers. One of the services available to state staffs is the review of teacher education programs by regional staff members of the U. S. Office of Education. This service should be used by Montana.

It is suggested also that yearly contracts with the teacher education institutions be established to clarify State Department responsibilities and University responsibilities for preservice and inservice training of teachers, with provisions for annual reviews of the programs.

The teacher educators who work with first-year teachers and supervise student teachers make State supervisors aware of trouble spots as they see them, and the State staff members let the teacher educators know the weaknesses of program they observe as a basis for revising the teacher education programs or planning inservice programs.

Because of the heavy work load of the teacher educators at Montana State University, an additional full-time teacher educator is needed. The one staff member had 70 junior and senior advisees in 1967-68 as well as a number of students working for a home economics education minor. Each quarter, in addition to teaching classes, she supervises student teachers, each of whom she tries to visit twice.

Each year the State supervisors take major responsibility for directing the annual vocational home economics teachers' conference - a three-day meeting in June or August designed to upgrade teachers; hold meetings for first-year teachers, and for teachers new to the State; work with teacher educators on plans for summer workshops for vocational teachers, including occasional workshops for supervising teachers; provide opportunities for leadership training for Montana Future Homemakers of America and their advisers; issue reports of summer workshops; keep teachers informed of new teaching materials and books via news bulletins at least twice a year; develop other types of instructional materials; and assist teachers on school visits.

The teacher educators assist in planning and participating in the vocational conferences, but they take major responsibility for the summer workshops at the universities. During the summer of 1967, a workshop to train teachers for the teaching of gainful employment programs was held as well as a child development workshop, two workshops to help prepare teachers for working with students with special needs, and a workshop on preparation for parenthood.

One of the concerns expressed by the State staff was that of "initiating change." Enough programs have been held on this subject at national meetings to know that this is a universal problem and not a problem unique to Montana.

At a National Leadership Seminar on Home Economics Education, the problem of effecting change was discussed by Brickell. He stated that:

> The most persuasive experience a school can have is to visit a successful new program and to observe it in action. Speeches, literature, research reports, and conversations with participants outside the actual instructional setting are interesting, but relatively unconvincing. Despite initial apathy or even opposition on the part of a number of teachers, new instructional programs can be successfully introduced. Faculty members ordinarily begin to prefer new methods within four months to a year after a novel program has been introduced, regardless of their very early reactions. It seems reasonable to believe that after teachers learn how to do the new job, they feel competent and secure.[8]

Brickell went on to say that although proposed innovations often arouse feelings of inadequacy and uncertainty in teachers, this does not mean that teachers are resisting change. He believes that the key to successful innovation is providing assistance to teachers as they begin to implement the new approach.

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[8] Henry Brickell, "Dynamics of Change," _A National Leadership Seminar on Home Economics Education,_ A Report, The Center for Vocational and Technical Education, The Ohio State University, March 28-31, 1966, p. 17.

How do Montana teachers regard the function of an inservice training program for teachers? Replies to this questionnaire item show that they consider as most important inservice programs that increase competency in teaching and that help teachers keep up with new trends in home economics and in education. A summary of their first three choices is presented in Table 49.

TABLE 49

FUNCTIONS OF INSERVICE TRAINING PROGRAMS AS SEEN BY THE RESPONDING HOME ECONOMICS TEACHERS

Function	Choice	Respondents from		Total	
		Vocational schools	Other schools	No.	Per cent
Increase competency in teaching	1st	25	26	51	43
	2nd	6	5	11	9
	3rd	6	10	16	14
Keep up with home economics trends	1st	8	17	25	21
	2nd	18	21	39	33
	3rd	9	8	17	14
Keep up with educational trends	1st	6	7	13	11
	2nd	9	5	14	12
	3rd	6	16	21	18
Broaden concept of homemaking education	1st	4	5	9	8
	2nd	9	19	28	24
	3rd	14	8	22	19
Foster experimentation and evaluation	1st	6	4	10	8
	2nd	6	5	11	9
	3rd	12	11	23	19
Develop as a person	1st	--	1	1	1
	2nd	1	3	4	3
	3rd	4	3	7	6

Source: SCHOOL SURVEY SERVICE questionnaires.

When reacting to the item "the things that supervisors do that I like," the most common responses follow in order of importance: give helpful suggestions; send new materials, films, and other resource materials; assist in planning the curriculum; and show friendliness and respect.

There were only a few who responded to the item about the things "I wish supervisors would do." Thirteen teachers, however, said they wished supervisors would visit more often; four, that they would like more practical hints for applying theoretical ideas; three for each of the following, that they would like from the supervisors more constructive criticism, summaries of successful techniques in different areas of home economics used by teachers in the State, information on new teaching trends, and that they would like supervisors to remain for a longer time and to refrain from taking criticism of cadets as criticism of themselves.

State supervisors and teacher educators in Montana may find some clues in Table 50 for ways in which they can help teachers through preservice or inservice education feel more secure in handling some of their responsibilities.

TABLE 50

ACTIVITIES IN WHICH HOME ECONOMICS TEACHERS SOMETIMES HAVE REQUESTED HELP, ACCORDING TO RESPONDENTS TO THE QUESTIONNAIRE

Kinds of assistance needed	Respondents from		Total	
	Vocational schools	Other schools	Number	Per cent
Developing evaluation devices for classroom use	33	45	78	66
Becoming acquainted with recent trends in subject matter	33	41	74	63
Developing teaching techniques	31	41	72	61
Selecting text and reference books	33	33	66	56
Planning programs to train for gainful employment	35	28	63	53
Selecting illustrative materials	26	27	53	45
Selecting and planning learning experiences	23	29	52	44
Improving appearance of the department	26	22	48	41
Planning the total homemaking program	20	22	42	36
Budgeting time for various units	20	21	41	35
Making survey of community needs	22	18	40	34
Integrating FHA experiences	23	17	40	34
Organizing classes for boys	16	20	36	31
Selecting and arranging equipment	13	17.	30	25

Source: SCHOOL SURVEY SERVICE questionnaires.

Montana teachers were asked in the questionnaire to indicate the types of inservice education they had participated in and the kinds of inservice education they felt would be valuable to them. In Table 51 their responses are compared to responses of Nevada teachers to whom a similar questionnaire had been sent. Both Montana and Nevada teachers ranked summer school first and individual efforts second in rank of inservice activities in which they had participated. In regard to the kinds of inservice activities which would be most helpful, Montana and Nevada teachers agree on the five most important activities though not exactly in the same order.

7. A sufficient number of qualified teachers is being prepared to meet the needs of the state for teachers of secondary, adult, post-secondary, and special needs classes. Certification requirements are such as to allow for teachers from areas related to home economics and teachers from business or industry to teach some homemaking classes for adults and programs for gainful employment at the various levels.

Although both universities in Montana are preparing a considerable number of home economics teachers, few of these teachers reach Montana classrooms according to the teacher educators and State supervisors.

TABLE 51

INSERVICE EDUCATION ACTIVITIES PARTICIPATED IN BY MONTANA AND NEVADA HOMEMAKING TEACHERS AND VALUES THEY PLACE ON SPECIFIC TYPES OF INSERVICE EDUCATION

Type of inservice education	Teachers have participated in				Teachers say will be valuable			
	Montana (N=118)		Nevada (N=33)		Montana (N=118)		Nevada (N=33)	
	Number	Rank	Number	Rank	Number	Rank	Number	Rank
Summer school	81	1	23	1	32	11	14	6.5
Field trips	51	4	15	3.5	43	9	12	9.5
Study groups	28	7	9	7	46	8	7	12
Visiting days	12	11	8	9	84	2	22	1.5
Summer workshop	57	3	13	5	40	10	12	9.5
Clinics	35	6	6	11	60	4	19	3
Conferences or institutes	41	5	15	3.5	52	6	13	8
Demonstration school	11	12	3	12	90	1	22	1.5
Evening or Saturday classes	25	8	8	9	56	5	18	4.5
Field service from outside consultants	18	9	10	6	73	3	18	4.5
Individual efforts	66	2	19	2	26	12	14	6.5
Action research projects	15	10	8	9	51	7	11	11

Source: SCHOOL SURVEY SERVICE questionnaires and questionnaires from Nevada teachers.

That secondary home economics teachers are scarce was confirmed by school administrators interviewed by the writer. Many stated that their greatest problem was securing well-qualified home economics teachers with the kinds of personalities which attract students.

Both universities have been including an adult education course in the preservice curricula so that majors preparing to teach home economics at the secondary school level might also be prepared to teach adult classes. Because there are presently no certification requirements for adult teachers, anyone a school district feels is prepared by training or experience to teach an adult class may do so. Adult teachers, according to the State supervisor, are drawn not only from secondary school home economics teachers but from home economists and others living in the community.

One director of adult education interviewed felt that secondary school teachers did not always make the best teachers for adult classes. It apparently is always easy to find teachers for adult sewing classes, but the scarcity of other types of adult offerings indicates that there may be a need to train persons to teach other types of courses or to seek instructors from the areas of guidance and elementary education for classes in parent education or child development and to locate other teachers from business and industry for gainful employment programs, areas of home furnishings, money management, etc.

Summer workshops for teachers or potential teachers of adult classes could be offered by teacher training institutions, and course outlines and lesson plans could be developed in a variety of home economics areas for the purpose of making these available to adult teachers, thus stimulating the development of adult education programs in areas other than clothing construction.

To ease the shortage of well-qualified teachers, a program of recruitment could be expanded to include graduate home economists not currently working who might be encouraged to teach after a concentrated summer workshop or through a planned program to meet certification requirements.

8. Seeking new and better methods, materials, and subject matter is provided through a program of research and pilot programs. Promising individuals are encouraged to continue advanced study and to pursue a research problem. Attention to teachers is called to studies which have particular meaning for them.

Because of the heavy work loads of the two State supervisors, they can find little time for research or pilot programs; however, they disseminate information on research studies which they believe will be helpful to teachers.

At Montana State University, where a graduate program is in operation, the acting teacher educator says that she is almost too busy to work with graduate students on research projects, another reason why an additional staff member is needed at this institution. A discussion of the writer with the Head of the Home Eonomics Department at that institution revealed that most students working on Master's degrees choose to obtain that degree by taking additional credits and by writing a graduate paper rather than by writing a thesis. She believed it would be helpful if the State staff submitted ideas for needed research to the Department in order that the University staff might be able to encourage students to work on research which was needed.

Recently the teacher educator at Montana State University (who is on leave of absence to work on an advanced degree) did a survey of curriculum needs indicated by ninth grade girls and their parents. This study was conducted during the 1965-66 school year, and it was sponsored by the Department of Home Economics at Montana State University and the Bozeman Public Schools. Studies of this kind can be very helpful in making curriculum decisions.

9. Service to the state is provided through a variety of methods. Services are extended to both vocational and nonvocational programs and to teachers and administrators of the day-school, adult, and post-secondary programs. Services are based on the needs of teachers and the needs of the state and have sufficient depth to provide some impact on the major objectives of the program.

Service has been provided by the State supervisors to schools through school visits and consultations with teachers and administrators. In recent years each school has been visited about once in every three years. In cases of special requests, additional visits are made. In 1967-68 the area meetings have tended to take the place of school visits although all requests for service were being met. Types of consultative service given on school visitations are participating in evaluating of local programs; meeting with teachers, administrators, local boards of education, and other community groups to interpret and explain the possibilities for programs of vocational education in homemaking and wage-earning occupations related to home economics; providing consultant service on space and equipment in order to help teachers and superintendents meet vocational standards in schools; reviewing plans for new departments and remodeled departments; assisting teachers in their responsibilities as FHA advisers; helping administrators and teachers in planning for adult education programs; and in other ways assisting schools with the development and improvement of vocational education..

Without exception the State supervisors were highly praised by the administrators and teachers contacted by the writer. They all said that the State staff members had been very helpful and had given fine service, but several commented upon how busy the State supervisors were. The writer felt, however, that some schools could have profited from assistance if they had realized it was available.

The teacher educators give service also to schools at the time they visit student teachers and first-year teachers. Several principals and superintendents stated that the services of the teacher educators had been helpful, also.

10. Guidance is provided by the state staff to state officers and advisers of the Association of Future Homemakers.

The Assistant State Supervisor serves as State Adviser of the Montana Association of Future Homemakers and works with officers to plan a State program of work and district and State meetings. Guidance is also provided for State officers in setting up goals and plans of work. A review of the minutes of the last State executive board meeting provided evidence that FHA'ers are being well trained for their leadership responsibilities.

Twenty-nine teachers took advantage of the opportunity to attend a workshop held in June, 1966 on the subject 'Implementing Future Homemakers Through the High School Home Economics Program." The national FHA Adviser was the leader of the workshop. This provided an opportunity for advisers of FHA chapters to receive some inservice training.

11. The state supervisors cooperate with other agencies or groups in statewide activities that have definite value for vocational education.

The State staff has worked cooperatively with a variety of State groups and organizations in Montana to provide requested services. For example, in the year 1965-66 the State Supervisor participated in a status-of-women meeting to discuss home economics education in Montana. She also served as chairman of the Joint Staff Committee that same year; this committee is composed of representatives from the State Board of Health and the Department of Public Instruction, and they work cooperatively on health education and health problems that are of interest to both groups. In 1965-66 she assisted also with the guidance sectional meeting program of the vocational education conference.

The State Supervisor works with the Audio-Visual and Library Services. Home economics films are previewed and evaluated by both the State staff of vocational education and the audio-visual staff prior to purchase. She works also with the school evaluation and accreditation staff of the State Department of Public Instruction. During recent years she has served as a member of the Montana Rural Safety Committee, as State Convention Chairman of the Montana Home Economics Association, and as a member of a committee for improving family life education in Montana.

12. Provision is made in the annual program of work for interpreting the home economics program through a variety of media.

The 1967-68 program of work of the State staff includes an objective, "To provide an effective and functional information program." Six major points of emphasis were planned under this objective, including articles in the NEA Journal; revision of policy bulletin; revision of the bulletin, "Opportunities in Home Economics in Montana"; a presentation at administrators' conference and school board association; new articles in Montana Vocational News and Montana Home Economics Association News Bulletin; and bulletin boards and displays for area or State home economics meetings.

13. Reporting by schools is kept to a minimum but is adequate to keep records needed for Federal reports and for a history of the growth and development of the home economics program.

A lack of consistency in summarizing enrollment data from schools throughout the years made it difficult for the Survey Staff member for the home economics program to summarize statistics in this area.

There is a need for the State staff to decide just what data are needed for Federal and State reports and to make an effort to summarize these statistics for each annual descriptive and statistical report so that an adequate history of the program can be maintained.

The present application-for-reimbursement form appears to be easy to use and adequate for data collection purposes; however, since nonreimbursed home economics programs do not submit applications for reimbursement, data from these schools are not as easy to collect. Without information from nonreimbursed schools, however, home economics statistics in Montana are not very meaningful. A data processing system set up to collect desired information should be put into operation.

14. Funding for home economics education programs is adequate for the strengthening and improving of existing programs as well as for expansion and new programs.

According to the State Supervisor of Home Economics, secondary programs in homemaking education were reimbursed at a rate of 17 1/2 per cent in 1966-67, which she felt was inadequate. Adult programs in homemaking were reimbursed at the rate of 35 per cent of the instructor's salary, allowing for a prepartion period for each lesson.

Programs for gainful employment were reimbursed at a rate of 50 per cent of the total cost. One post-secondary program failed to develop because funds from the Vocational Education Act of 1963 could not be assured, according to a staff member of a community college.

In Table 52 are shown for a recent 10-year period the annual expenditures in Montana for programs of vocational home economics education. There is evident a constant increase of financial support. The increase of the last year over the first one in the period is 53 per cent.

TABLE 52

EXPENDITURES* FOR VOCATIONAL HOME ECONOMICS IN MONTANA, 1954-55 THROUGH 1963-64

School year	Amount	Index**
1954-55	$220,792	100
1955-56	242,037	110
1956-57	247,836	112
1957-58	273,162	124
1958-59	281,085	127
1959-60	285,666	129
1960-61	290,150	131
1961-62	295,835	134
1962-63	330,414	150
1963-64	337,383	153

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1955 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1954-55 used as the base year (index = 100).

Information available during the survey indicated that the State expenditures continued to increase appreciably beyond the last year shown in Table 52, and that the increases were due to increased local expenditures rather than State or Federal. Because demand for State and Federal funds will be constantly increasing, priorities will need to be determined.

The expenditures for vocational home economics education by Montana for a recent period are compared with those of the 10 other Western states in Table 53. The indexes in Table 53 show that for the years for which indexes of expenditure are shown Montana is at the bottom of the group for all but the second year. In that year there were two states (Oregon and Utah) which had indexes lower than that for Montana, thus showing lesser gains in expenditures when compared with the base year (1955-56).

TABLE 53

EXPENDITURES* FOR VOCATIONAL HOME ECONOMICS IN 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT EXPENDITURES, BY ALTERNATE YEARS, FOR 1957-58 THROUGH 1963-64

State	Expenditures 1955-56	Index** of expenditures			
		1957-58	1959-60	1961-62	1963-64
Arizona	$ 406,179	131	152	190	219
California	2,939,462	120	150	174	201
Colorado	569,153	113	130	143	170
Idaho	276,365	124	140	165	195
MONTANA	242,037	113	118	122	139
Nevada	148,624	117	121	131	162
New Mexico	270,684	115	136	143	166
Oregon	439,818	124	114	126	140
Utah	232,258	118	110	127	182
Washington	1,190,302	126	139	170	193
Wyoming	170,759	199	133	173	169
U. S. (total)	$52,928,087	118	129	150	169

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* Does not include expenditures for vocational guidance.

** The base year is 1955-56 (index = 100).

Home Economics Programs at the Local Level

In order to evaluate Montana's home economics education programs at the local level, the criteria previously listed in this chapter will be used. Each criterion will be repeated and will be followed by some discussion of its application to Montana.

1. Home economics programs have shown a steady growth throughout the years and are accessible to and serve the needs of the following groups for homemaking and/or for gainful employment: secondary, adult, post-secondary, and persons with special needs.

In Table 54 are shown the yearly enrollments in Montana for the most recent 10-year period for which data were available. There has been a slow but steady growth in enrollments in the last half of the period. The only decreases shown are for the second and third years of the period.

TABLE 54

MONTANA ENROLLMENTS IN VOCATIONAL HOME ECONOMICS, 1956-57 THROUGH 1965-66

School year	Number	Index*
1956-57	4,289	100
1957-58	4,059	95
1958-59	3,557	83
1959-60	3,618	84
1960-61	3,585	84
1961-62	4,018	94
1962-63	4,107	96
1963-64	4,644	108
1964-65	5,069	118
1965-66	5,234	122

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964); and Montana Director of Vocational Education (Fiscal years 1965 and 1966).

* 1956-57 used as the base year (index = 100).

Home economics enrollments in Montana are compared with those in the 10 other Western states in Table 55. For all the years for which indexes are shown, Montana's indexes of enrollment in Table 55 place the State at the bottom or next to the bottom in enrollment growth every year.

Home economics has been offered in a variety of types of schools throughout the previous 10-year period including public high schools, public junior high schools, elementary schools, private schools, and State schools.

With growth in enrollments in home economics education has come a concomitant growth in the number of teachers over the past 10 years. For example, in 1957-58 there were 69 teachers of vocational programs in the public schools and 90 teachers of nonvocational programs in public schools. By 1966-67 these numbers had grown, respectively, to 78 and 103.

Figure 3 shows the locations of the 70 Montana high schools and junior high schools which had vocational home economics programs in 1967-68. In addition to these reimbursed programs, there were 78 schools offering nonreimbursed home economics programs. It can be noted in Figure 3 that there are 15 counties not having any vocational home economics programs. Eight of these are in the eastern half of the State, and seven are in the western half.

Enrollments in adult education programs have shown the greatest growth of any of the programs over the 10-year period. During the year 1966-67 there were 16 centers which offered adult programs in homemaking education, this year being surpassed only by the years 1963-64 and 1965-66.

Adult education programs have been almost exclusively in the area of clothing, a fact which is of some concern to the State Supervisor of Home Economics Education, who assumes responsibility for the adult program. She feels that the program is meeting primarily the needs of those interested in sewing.

TABLE 55

ENROLLMENTS IN VOCATIONAL HOME ECONOMICS IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT ENROLLMENTS, BY ALTERNATE YEARS, 1957-58 THROUGH 1963-64

State	Enrollment 1955-56	Index* of enrollment			
		1957-58	1959-60	1961-62	1963-64
Arizona	8,905	192	132	161	192
California	129,417	104	111	115	126
Colorado	18,675	108	107	117	123
Idaho	5,218	124	127	136	155
MONTANA	4,161	98	87	97	112
Nevada	2,710	131	111	112	155
New Mexico	4,344	125	119	127	158
Oregon	16,724	115	112	95	99
Utah	11,831	125	117	114	112
Washington	38,285	109	111	128	122
Wyoming	2,787	110	126	132	136
U. S. (total)	1,486,816	105	105	116	136

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal Years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* The base year is 1955-56 (index = 100).

Several reasons may exist for the popularity of clothing construction classes: sewing may be a means of creative expression for persons who desire leisure time activities; a skill such as clothing construction is not as easy to learn from reading and private study as other areas of home economics may be; and instructors for clothing classes are sometimes easier to find than for other areas.

For the past three years the Missoula Adult Education Department has offered Homemaker Assistant classes to train women for gainful employment in the home service area. This program was being offered again in 1967-68. Because of the great need in communities for various types of home service, major emphasis might well be placed on adult classes to train for gainful employment.

According to one director of vocational education, adult homemaking education classes in clothing construction have developed employable skills. He has evidence that some women who have taken the program are using their skills in sewing not only for themselves and their families but for others. Perhaps some of the adult sewing classes could be designed to train for employment.

Except for several course offerings at the State School for Girls at Helena, no programs in the State are especially planned for "students with special needs."

2. Physical facilities of home economics departments, including furnishings and equipment, supplies, and learning resource materials, are adequate for high quality instruction. The learning environments are such that they would attract students to the programs.

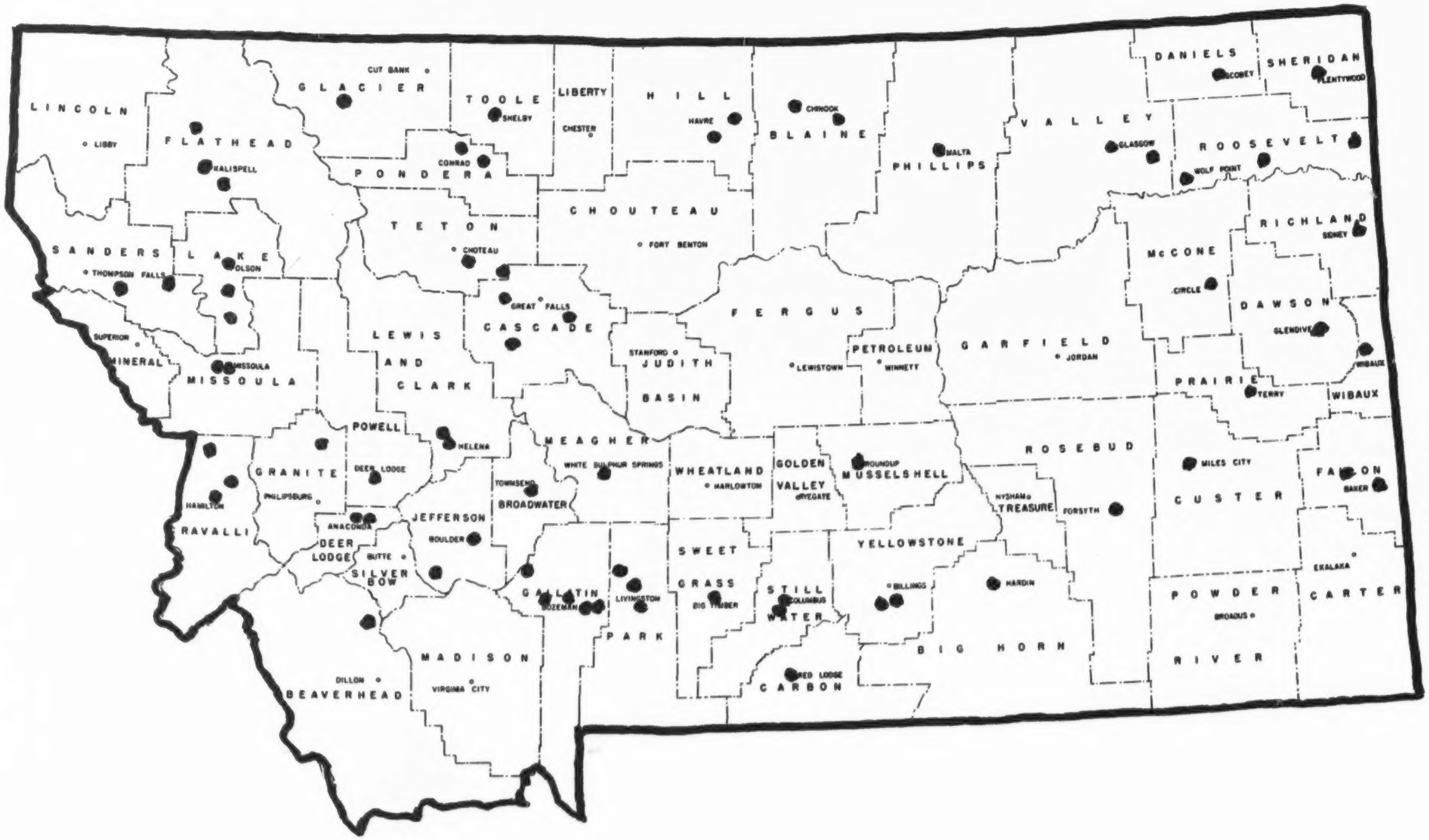
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
RICHLAND
SIDNEY
McCONE
CIRCLE
DAWSON
GLENDIVE
MINERAL
SUPERIOR
MISSOULA
LEWIS AND CLARK
CASCADE
GREAT FALLS
JUDITH BASIN
STANFORD
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
GARFIELD
JORDAN
PRAIRIE
TERRY
WIBAUX
POWELL
DEER LODGE
HELENA
MEAGHER
WHITE SULPHUR SPRINGS
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
ROSEBUD
FORSYTH
CUSTER
MILES CITY
FALLON
BAKER
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
TOWNSEND
BROADWATER
JEFFERSON
BOULDER
ANACONDA
DEER LODGE
BUTTE
SILVER BOW
TREASURE
HYSHAM
SWEET GRASS
BIG TIMBER
STILL WATER
COLUMBUS
YELLOWSTONE
BILLINGS
HARDIN
BIG HORN
POWDER RIVER
BROADUS
CARTER
EKALAKA
GALLATIN
BOZEMAN
LIVINGSTON
PARK
CARBON
RED LODGE
MADISON
VIRGINIA CITY
BEAVERHEAD
DILLON

Figure 3. Locations, by counties, of programs of vocational home economics in the secondary schools of Montana, 1967-68

(Source: Montana's State Supervisor of Home Economics Education)

The home economics departments which the writer visited showed evidence for the most part of good planning to meet instruction requirements. Equipment and instructional materials appeared to be well supplied, and teachers reported that they were usually able to get requested items. A number of attractive, aesthetic departments were observed as well as some which were crowded and lacking in adequate space. For the most part, however, Montana is to be congratulated on its attractive facilities for home economics education.

The most frequent cause of complaints by home economics teachers concerning their facilities was the lack of adequate space for expansion of the program. In some schools in which growing enrollments have limited the expansion of the home economics program within the assigned home economics laboratories, it is suggested that home economics expand into other available classrooms for teaching units or courses which do not require a laboratory. Facilities in schools, such as the school cafeteria, might be used for gainful employment training programs in food service.

Other adjustments or additions of equipment would need to be made in existing departments if gainful employment programs are initiated.

3. High-quality instruction programs are offered:

    (a) to provide instruction which will enable families to improve the quality of their family living through more effective development and utilization of human and material resources

    (b) to train for gainful employment in occupations which utilize the knowledge and skills of home economics

    Home economics teachers feel adequately prepared to teach all areas of the home economics program.

In the brief visits which the writer made to home economics departments in the high schools of Montana, she was unable to judge fairly all the aspects of quality of the programs for all the teachers in the State. Some very fine programs were observed; however, the interviewer heard some complaints from school administrators regarding the competency of their home economics teachers.

Survey questionnaires sent to all home economics teachers (vocational and nonvocational) inquired about the types of preparation they had received in their college work and reactions as to the types of training that would have been helpful. The results are summarized in Table 56, which is self-explanatory.

4. Homemaking education programs meet the general characteristics or requirements as described in the state department of education publications. The scope of the secondary and adult homemaking education program is broad and deals with the fundamental values and problems in the several aspects of home living and homemaking such as family relations, child development, clothing and textiles, foods and nutrition, housing, and management of resources. Homemaking programs are based on the interests and needs of the students in their homes, and in their communities. Changes in society are considered in program planning, and the needs of all students are considered.

The writer was impressed, on her visits to schools and through the review of programs with teachers, by the broad scope of the programs usually offered. Frequently, in addition to Homemaking I, Homemaking II, and Homemaking III, a Senior Homemaking course was offered especially for those girls who had not had previous home economics courses in high school.

TABLE 56

TEACHERS' OPINIONS REGARDING THEIR PREPARATION FOR VARIOUS RESPONSIBILITIES

Experience	Per cent of respondents			
	Had training in the experience in college		Believes training would have been helpful	
	Vocational	Non-vocational	Vocational	Non-vocational
IN THE CLASSROOM				
Conferring with students	37	40	53	40
Conferring with teachers	29	43	41	31
Conferring with parents	25	28	59	54
Using cumulative records	37	43	55	40
Setting up goals	84	73	10	13
Planning and carrying out learning activites	90	78	6	10
Choosing, developing, and using devices in evaluating progress of students	75	61	25	27
Selecting and caring for teaching aids	61	57	29	24
Creating a clean, convenient, attractive homelike atmosphere	65	57	25	22
Planning a department budget	25	21	61	61
Keeping records of expenditure	33	31	47	42
Making inventories	33	36	49	40
Directing a class to earn money for special projects	18	13	59	55
IN THE SCHOOL AS A WHOLE				
Conferring with administrators	31	37	43	36
Cooperating with faculty groups on problems of methods, curriculum, etc.	39	36	35	39
Working with State and local committees	29	21	37	46
Attending group conferences and institutes	57	39	18	25
Writing for publications	35	36	45	31
Participating in studies or research	57	39	37	31
Participating in school lunch program	29	15	33	42
Participating in school health program	29	21	41	40
Participating in social and civic activities	43	37	24	27
Participating in guidance and home-room activities	37	28	49	40
Working with elementary grades	16	21	41	34
Participating in junior high experiences	43	42	27	30
Participating in senior high school program (art, shop, science, agriculture)	47	30	20	24
IN THE COMMUNITY				
Participating in adult education program	47	36	33	34
Cooperating with business, industry, and farm groups	24	24	41	30
Cooperating with other community groups such as religious, scout troops, girl reserves, nursery schools, etc.	39	31	27	19
Making home contacts - visiting home	49	31	33	34

Source: SCHOOL SURVEY SERVICE questionnaires.

Because many Montana schools offer basic programs of home economics in grades 7, 8, and 9, students with special interests could be served by depth courses established in several home economics areas. Two schools which were visited offered this type of program. Both of these schools offer courses also for boys. Trump encouraged these special interest classes when he said:

> The other aspect of the curricular organization concerns provisions for those students with special interests and talents in home economics who wish to study various aspects of the subject systematically and in greater depth. Most of this depth education will take place during the final three years of the secondary school when those students have more time available because they also will have completed their basic education in the other school subjects. Various levels of depth education will recognize variations in talents, interests, and available time for different students.[9]

That Montana teachers are giving some thought to possibilities for depth courses is supported by data presented in Table 57. Semester special interest courses are proposed in the recent (October, 1967) State program planning bulletin.

TABLE 57

OPINIONS OF TEACHERS AS TO WHETHER OR NOT DEPTH COURSES WOULD MEET NEEDS OF STUDENTS WITH SPECIAL INTERESTS

Special interest	Response	Respondents from		Total	
		Vocational schools	Other schools	Number	Per cent
Clothing selection and wardrobe planning	Yes	24	30	54	46
	No	11	10	21	18
Clothing construction	Yes	35	35	70	59
	No	6	4	10	9
Family meals and hospitality	Yes	34	31	65	55
	No	7	6	13	11
Consumer education	Yes	27	28	55	47
	No	7	10	17	14
Child development	Yes	29	28	57	48
	No	9	12	21	18
Marriage and family relationships	Yes	42	33	75	64
	No	4	9	13	11
Home management	Yes	24	22	46	39
	No	15	15	31	26
Housing and interior design	Yes	31	29	60	51
	No	10	10	20	17

Source: SCHOOL SURVEY SERVICE questionnaires.

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[9] J. Lloyd Trump, "Home Economics, a Look into the Future," The Bulletin of the National Association of Secondary School Principals, Volume 48, December, 1964, p. 81.

Teachers visited were asked by the writer how they planned programs to meet the needs of students and the changing patterns of society such as the high rate of mobility, early marriages, rise of premarital pregnancies, change from a producing to a consuming society, the increase of working wives and mothers, and the changing roles of men and women.

Several teachers remarked that societal changes were not felt so much in Montana, that there were lots of home gardens, that families did home sewing, and that there was still much home production. Therefore, they still emphasized these types of home production.

Interviews with Montana teachers revealed that they planned programs on the basis of recommendations from the State Department of Public Instruction, that they planned with students, that they used ideas from questionnaires sent to parents, and that they used what they knew about their communities and the needs of society as a basis for planning.

One teacher said she was giving more emphasis on child care because former students who have come back to the department to visit after marriage and with their babies have told her about the value of and the need to teach more about child guidance.

Twenty per cent of the teachers who replied to the questionnaire indicated that they had made informal local studies to find answers to questions growing out of teaching. Several had surveyed former home economics students about what should be emphasized in the program, and four had used lay advisory committees.

Montana teachers indicated in replies from the questionnaire that their most frequent problems related to program planning were the determination of appropriate timing for units to be covered, the provision for varying abilities and backgrounds of students, deciding what to teach at various grade levels, determining appropriate texts and locating suitable resource materials, and challenging the individual student.

Statistics from the Montana State Health Department provide implications for the need for homemaking education. It can be seen from Table 58 that more women in Montana are married at ages 15-19 than at any other age.

TABLE 58

AGES OF MONTANA MEN AND WOMEN AT FIRST MARRIAGE, 1966

Age group	Men		Women	
	Number	Per cent	Number	Per cent
Under 15	--	--	1	*
15-19	638	17	1,903	52
20-24	2,318	63	1,613	44
25-29	585	16	136	4
30-34	95	3	16	*
35-39	32	1	13	*
40-44	12	*	4	*
45-49	6	*	2	*
50-54	3	*	1	*
55 and above	1	*	1	*
Total	3,690	100	3,690	100

Source: Montana State Health Department.

* Less than 0.5 per cent.

Data in Table 59 show that mothers 15-19 were responsible for 18 per cent of Montana's births in 1966. This indicates that many students studying homemaking in Montana high schools have an early use for classroom learnings preparing them for their roles as wives and mothers. Both teachers and adminstrators interviewed stated that they believed "preparation for homemaking" was the major purpose of home economics education in their schools.

The large number of births of young mothers by age 20 also points out the need for young women to have training for marriage and parenthood during their high school years.

TABLE 59

NUMBER OF MONTANA BIRTHS BY AGE OF MOTHER, 1966

Age of mother	Births	
	Number	Per cent
Under 15	14	*
15-19	2,107	18
20-24	4,276	35
25-29	3,010	25
30-34	1,579	13
35-39	883	7
40-44	283	2
45 and over	18	*
Not stated	3	*
Total	12,173	100

Source: Montana State Health Department.

* Less than 0.5 per cent.

Pregnancies out of wedlock are increasing throughout the nation, and Montana is no exception. Of the more than 12,000 births in Montana in 1966, there were 774 illegitimate births. This implies a need for sex education also.

In addition to the emphasis now being expended at the State level to initiate gainful employment programs, homemaking education programs need to be strengthened and expanded to include additional emphasis on serving boys and girls in courses to prepare for marriage parenthood, such as the program on Courtship and Marriage now being offered at one senior high school in the State. There, a team of teachers explore with boys and girls topics such as the family in a democratic society, family finance and home management, and preparation for marriage and parenthood.

Congressman Pucinski of Illinois, and Chairman of the House General Subcommittee on Education, stressed the importance of occupational education when he said:

> It has always been my ambition to provide 'marketable' skills to each person who must at some time enter the labor market....I believe the need for this type of training - homemaking and other skills to make an individual useful to his community - can be seen best in the estimate that by 1970 one out of every two teenagers

> will seek some type of vocational study. This is only 30 months away. I hope we will be ready for that day.[10]

5. Home economics programs for gainful employment meet the characteristics and standards as described in the State Plan.

Although only two secondary programs are in operation to train for gainful employment in home economics, both of these programs appear to be well planned and to meet the criteria established in the State Plan. Adult programs to train homemaker assistants also appeared to meet established requirements.

The course content of each program had been based on advice and counsel of representatives of the occupation for which training was being given. It had been developed through an analysis of the occupation or cluster of closely related occupations. The nature of the subject matter and skill content, the instructional procedures, and the length of training period are designed to assure job entry competency.

The program of instruction combines and coordinates related classroom instruction with laboratory or cooperative work or other occupational experience appropriate to the vocational objective of the student and of sufficient duration to develop competencies necessary to fit her for employment. Each instructional program is realistic in the light of actual or reliable anticipated opportunities for gainful employment of graduates. Each program appeared to be adequately supervised by local directors of vocational education and by the State supervisors, and students had been carefully selected for enrollment on the basis of their potential for achieving competence in the occupation, according to teachers or heads of departments interviewed. Classrooms and laboratories and other facilities appeared to be adequate to enable those being trained to meet the occupational objective for which training is intended.

6. Home, community, and FHA experiences are encouraged as a means of applying classroom learnings to the home and community.

Home economics teachers interviewed appeared for the most part to believe in the value of the FHA youth activity. When asked the question, "What does the Future Homemakers of America Youth Organization Contribute to the Home Economics Program?" two representative replies were as follows:

> FHA provides a social value for girls who do not take part in other school activities. It helps them develop poise and leadership. FHA is another way of reaching the goals of the home economics program. Some of our FHA'ers learned to model clothes so well for a District FHA meeting that they were invited to model for a large department store.
>
> FHA is wonderful - lots of girls take more interest in the home economics program if they are also in FHA. FHA trains for leadership. It is remarkable to see how Future Homemakers grow in leadership ability.

7. Home economics teachers keep the community informed in regard to the purposes and achievements of the home economics program.

Home economics teachers are using a variety of means to interpret their programs to the public according to their responses summarized in Table 60.

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[10] Roman C. Pucinski, "New Rights for Women," American Vocational Journal, October, 1967, pp. 84-85.

TABLE 60

METHODS USED BY HOME ECONOMICS TEACHERS TO INTERPRET THE PROGRAM TO THE PUBLIC

Method	Respondents from		Total	
	Vocational schools	Other schools	Number	Per cent
Talk with parents (PTA, home visits)	20	21	41	34
Newspaper publicity	26	13	39	33
Open house and special programs	15	19	34	29
Style shows	12	13	25	21
Social affairs (teas, banquets, Foreign Foods night)	10	10	20	17
Cooperation with other groups (school and civic)	11	7	18	15
Radio and TV programs	12	--	12	10
Home projects	7	4	11	9
Communications and materials sent to the home	5	3	8	7
Window displays and bulletin boards	5	3	8	7
FHA activities	4	2	6	5
Organizing program and pupil needs	1	3	4	3
Lay advisory committee	4	--	4	3

Source: SCHOOL SURVEY SERVICE questionnaires.

When asked the most effective method used to interpret the home economics program to the public, 29 per cent of those returning questionaires made no response. The majority of the responses made are shown below:

Most effective means to interpret homemaking programs to the public	Per cent of respondents
Talking with parents	14
Style shows	14
Newspaper publicity	8
Special programs	8
Social affairs	7
Cooperation with other groups	5
Lay Advisory Committee	5
Home projects	5

8. Administrators, parents, and other adults understand and support the home economics program.

Data in Table 61 show that teachers think school administrators have a better understanding of the home economics program than do others in the school and community. If the teacher opinions are correct, it appears that they are doing an inadequate job in interpreting their programs to the Montana communities.

TABLE 61

TEACHERS' OPINIONS ABOUT HOW WELL OTHERS UNDERSTAND THE PURPOSES AND FUNCTIONING OF THE HOME ECONOMICS PROGRAM

Group	Extent of understanding	Respondents from: Vocational schools	Respondents from: Other schools	Total: Number	Total: Per cent
School administration	Great	26	12	38	32
	Average	23	37	60	51
	Little	2	5	7	6
	Uncertain	--	3	3	3
School board members	Great	10	8	18	15
	Average	24	24	48	41
	Little	11	11	22	19
	Uncertain	6	10	16	14
School counselors	Great	13	11	24	20
	Average	29	25	54	46
	Little	3	8	11	9
	Uncertain	2	5	7	6
Faculty in general	Great	6	8	14	12
	Average	30	31	61	52
	Little	13	16	29	25
	Uncertain	2	1	3	3
Parents	Great	7	4	11	9
	Average	28	34	62	52
	Little	11	8	19	16
	Uncertain	5	9	14	12

Source: SCHOOL SURVEY SERVICE questionnaires.

Post-Secondary Education in Home Economics

Although there are currently no home economics programs in Montana at the post-secondary level to train for gainful employment or for homemaking, administrators of two area vocational schools and the presidents of two community colleges expressed an interest in including such programs as soon as feasible. Interest was expressed in such areas as culinary arts, licensed day-care center or licensed family day-care workers, and clothing services. One local vocational director expressed an interest in a program to train dietician assistants in connection with their plans for expansion of their program in health services.

Comments received in the writer's interviews with persons throughout the State reflected opinions quite favorable to post-secondary schools for the further preparation of people in the field of home economics, particularly its wage earning applications. One interviewee put it quite emphatically, "Post-secondary vocational education has got to come!"

Berneice Mallory, Chief of the Home Economics Unit, Occupations Section, U. S. Office of Education points out some of the advantages of post-high school occupational education:

> Society places a premium on education. Two years of post-high school education is fast becoming the accepted norm. Those who have completed

> such programs may be as common in tomorrow's community as the high school graduate is today.
>
> Occupational programs in a community college, technical institute, or other institute offering sound vocational education are likely to attract large numbers of students who would not otherwise further their education.
>
> Students who can look forward to spending two post-high school years in preparation for future occupations will be able to plan their high school programs in a different way; *i. e.*, they can spend more time in high school gaining a foundation for later occupational programs.
>
> Students who elect to start vocational training in high school and continue it in post-high school can build on their training for minimum job entry, and they can acquire a broader and more specialized background necessary in higher occupational levels.
>
> An area, a community, or a region that provides adequate post-high school programs in community colleges, technical institutes, or other types of institutions receives the interest and attention of industry that is seeking sites for relocation. Industries are more interested in being located in places where they can look to such post-high school education as the source of preparation for workers.
>
> To the extent that we provide adequate post-high school programs we will be able to minimize the immediate impact on the labor market of students who are ill-equipped to begin work.[11]

Montana is in a strategic position at this time to develop a plan for post-secondary occupational education. Mallory stresses that in setting up a system of post-secondary education, research should be used to support program development, the primary purpose of the post-secondary school should be to develop employment competencies, and provision should be made for preparation in a wide field of occupations.[12]

Nationwide the areas of (a) food management, production, and service and (b) care and guidance of children appear to be leading at the post-secondary level for home economics occupations. Interviews with employment security directors in various areas of Montana revealed that shortages of workers in these two areas were great. Household workers were also in demand. The dearth of child-care facilities for working parents and for others who need these services was apparent to the writer from a search through the yellow pages of telephone directories. Very few child-care facilities were listed.

Questionnaires sent by the Survey Staff to certain groups in Montana asked for the respondent's opinion regarding the extent of need for preparation in the State for a variety of occupations. Unfortunately, child-care occupations were not included in the list; however, an analysis was made concerning the home economics related occupations which were in the list. Following is the order of need indicated for Montana by their responses: cook (commercial), sales worker, waiter and waitress, food service management, upholsterer (furniture), baker, tailor (garment), dressmaker (seamstress), alteration worker (woman), and alteration worker (man). Except for sales worker, the occupations related to food preparation and services ranked among those needed most. Training programs for the skilled occupations listed could be given at the secondary, post-secondary, or adult levels. Technical occupations, such as food service management, should be offered as a post-secondary program and could be an Associate of Science program.

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[11] Berneice Mallory, "Development of Post-High School Programs", *A National Leadership Seminar on Home Economics Education*, A Report, March 28-31, 1966, p. 49.

[12] *Ibid.*, pp. 50-51.

There is a real nationwide need for trained food service workers. Regarding this need Montague, Chairman of the Board, Greyhound Food Management, Incorporated, points out that there will be a need in the food service industry for not fewer than 250,000 new workers each year for the next 10 years: 75,000 for new jobs and 175,000 for replacements in already established jobs. Montague stresses that this growing industry needs a formal and continuing program of training.[13]

Some of these occupations are closely related to trade and industrial education or distributive education, and cooperation among the services in the development of training programs for such occupations would be advantageous.

Although sales worker is an occupation primarily related to distributive education, it is included in the list of home economics related occupations because it offers many possibilities for cooperative training programs with home economics. For example, "Fashion Trades" could be offered as a post-secondary program under either service, or both services could combine talents in order to strengthen the offering.

Some of these occupations are closely related to trade and industrial education; for example, some of the food service occupations could be offered under the trade and industrial service or under home economics, depending on whether the emphasis is institutional or commercial. Or the two services could combine forces to develop the best possible program using the talents from each division.

Home Economics Teachers

Under the center heading "The Home Economics Program at the State Level" earlier in this chapter, the preparation of home economics teachers has already been discussed. Both the University of Montana and Montana State University have similar programs for training these teachers, with a balanced technical program in the five areas of home economics: child development and family relations, home management, housing, clothing and textiles, and foods and nutrition. Approximately 56 quarter credits in home economics are required as well as approximately 31 quarter credits in professional education. General education requirements include art, science, economics, sociology, psychology, English, government, and physical education. A teaching minor is required. Provision is also made for electives.

Students working on a major in home economics education are required to register in the School of Home Economics and work with an adviser from that school. Early and continued guidance is provided.

Off-campus student teaching is provided by each university. In addition to this off-campus teaching experience, majors at Montana State University are required to register for a one- or two-hour education course, "School Exploratory Experience." This experience is in the fall, prior to the opening of the University, and it provides the student an opportunity to observe teachers and students in classroom situations. Planned observations and experiences help to acquaint the University student with methods of teaching, handling of routines, discipline, grading, and similar procedures as well as to provide him an opportunity to study teaching materials.

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[13] Henry A. Montague, "Food Service Manpower Requirements for an Expanding Industry," The National Restaurant Association: Manpower and Education for the Food Service Industry, Report of the Conference on Food Service Industry, Manpower and Education, The Palmer House, Chicago, Illinois, February 22-24, 1967, pp. 39-41.

Today no one believes that preparation for teaching is ever completed. As soon as teachers enter their first year of teaching, they discover inadequacies in their preparation. Keeping programs up to date as to what to teach and how to teach requires constant in-service education. Efforts along this line in Montana have already been described in this chapter.

If Montana home economics teachers are to be prepared to teach gainful employment programs, occupational experiences would be particularly helpful in giving them security in this type of teaching. Home economics education majors should be encouraged to secure some work experience in home economics related occupations. A plan might be developed for summer work experience as a part of the teacher education program. Table 62 summarizes the occupational experience of the respondents.

TABLE 62

OCCUPATIONAL EXPERIENCE OF MONTANA HOME ECONOMICS TEACHERS

Type of occupational experience	Per cent of respondents indicating			
	During high school	During college	Summer or other occupational experience	Feels prepared to teach
No response	13	8	22	14
None	13	8	7	14
Food services	22	57	13	41
Child care services	21	14	8	25
Clothing services	3	5	3	27
Home services	18	10	3	24
Retail merchandising	23	19	11	8
Other*	34	50	69	38

Source: SCHOOL SURVEY SERVICE questionnaires.

* Other includes a variety of occupations: housework, farm work, library, office work, telephone operator, teacher assistant, and teaching a variety of other subjects.

In the table it can be noted that 41 per cent of the home economics teachers feel prepared to teach food service occupations. This is also the area in which most teachers had training and experience. Twenty-seven per cent indicated they felt qualified to teach clothing services. Here, however, few indicated work experience, but many had probably sewed for themselves and others and may have had extensive teaching experience in this area. A large number indicated experience in child care, and 25 per cent said they felt prepared to teach this area. Although a large number of teachers had retail merchandising experience, only 8 per cent indicated they felt prepared to teach this area. Home economics teachers do not usually take retail merchandising courses, and the lack of formal training apparently makes them feel less competent to teach this area.

To receive a Standard Teaching Certificate (Class 2) endorsed for home economics, a person must have completed an approved teacher education program with a Bachelor's degree from an accredited college or university. A major with 45 credits and a minor with 30 quarter credits are required. A major in depth (60 quarter credits) can be substituted for a major and a minor.

To renew a standard certificate, six quarter credits must have been earned during the preceding five years, and the applicant must have completed one year of successful teaching.

To obtain a Professional Teaching Certificate (Class 1) a Master's degree or a college-approved fifth year is required as well as three years of successful teaching experience.

To renew a professional certificate, one year of successful teaching is required during a five-year period.

Individual cases not meeting the above requirements will be considered for temporary or provisional approval. In no case will this approval be given unless the teacher is making definite plans for meeting all requirements within a period of three years. No school will be approved if it does not acquire a fully qualified teacher within a three-year time limit.

Class 4, Special Certificates for Vocational, Recreation, and Adult Education may be issued to teachers in specialized or technological areas. According to the bulletin published by the State Department of Public Instruction, Certification of Teachers and School Administrators in Montana, February, 1966, requirements vary with the situation.

Under this Class 4, teachers could be obtained from business or industry to teach gainful employment programs in home economics, provided they have occupational experience of such duration on a full-time employment basis as to assure vocational competency in the vocational field.

As gainful employment programs develop in Montana, this source of teachers will be extremely valuable, and the best possible teachers should be sought. Persons from business and industry, with some inservice education on teaching methods, will receive support and cooperation from employers. Certification requirements must be sufficiently lenient to allow these people to teach. It appears that in Montana they are lenient to this degree; if not, they should be revised.

It appears to the writer that the professional certificates should require additional credits for renewal and also that allowing three years for a teacher to teach on a provisional certificate is very generous. As long as a shortage of teachers exist, however, this may be necessary. The State Supervisor reported though that only a few Montana home economics teachers are teaching on provisional certificates.

Turnover of home economics teachers is a problem in Montana. Statistics in recent years show an average turnover of from 26.5 per cent (1965-66) to 37 per cent (1961-62).

The State Plan says that "teacher training programs shall be developed and maintained in such a manner as to provide for an adequate supply of the various types of professional vocational positions in the State."

Attitudes of Certain Groups in Montana Toward Home Economics

Vocational home economics programs on the secondary school level appeared to be well accepted by the majority of Montana high school administrators interviewed by the writer. Many expressed the belief that education for the responsibilities of homemaking and family living makes a real contribution to the educational programs of students. A few expressed the belief that homemaking education serves the needs of students who could not achieve satisfaction from the academic program.

Replies from questionnaires sent to guidance personnel, school principals, and superintendents of schools indicated that such courses as industrial arts, agriculture, and home economics are sometimes held is less esteem than are typical college preparatory courses. This feeling seemed to be most strongly held by guidance personnel and least strongly by school principals.

Ninety-one per cent of the home economics teachers reported a belief that a cross section of students of different ability levels are taking home economics. Teachers indicated that they were employing various methods to make home economics interesting and stimulating to the "bright" girls in their schools such as giving them special projects, outside reading, and special home experiences; encouraging extra work such as unusual cooking and displays; letting them assume responsibility in the department such as helping to teach; attempting to spark their interest with projects of individual interest; and letting them work at their own levels. Four respondents, however, said that "bright girls" were generally not guided into home economics classes.

There was a limited number of teacher responses to the open-end question as to the areas in which they feel most satisfied with their teaching and why. They seem to indicate that the areas in which they had had more training and experience are directly related to the degree of satisfaction they feel in teaching these areas.

Thirty-six respondents (31 per cent) from the home economics teacher group indicated that they were teaching something related to occupations or wage-earning jobs, and almost twice as many said they were not. Of those responding affirmatively, three-fourths said they were achieving it as a part of a unit of work in home economics. rather than as a full unit of work for a full semester or more.

Explanations of what they were teaching related to occupations revealed that 21 teachers were giving some information on careers in home economics; one teacher taught a class in clothing services; one a class in homemaker's assistant; one teacher planned to offer training in food service, clothing alterations, and child care; and one planned to help students apply concepts learned to car hopping, waitress work, and dishwashing.

Home economics teachers could provide valuable career information for students, acquainting them with the employment opportunities available following secondary, post-secondary, adult, or university training. Knowledge of career opportunities in home economics should be an integral part of each home economics class taught.

Montana home economics teachers, according to Table 63, believe that the greatest need in their communities for training in food occupations is for waitresses and cooks.

In conferences with employment services, restaurants, hospitals, and some persons in culinary unions, the writer found that a shortage of food service workers was great throughout Montana. The greatest shortage appeared to be in cooks although high quality waitresses were in short supply. Cooks trained in "manpower development" programs have reportedly been able to find employment although some have moved to other states having higher pay scales.

In communities where a number of food establishments are located, an advisory committee should investigate food service training programs at all levels. Home economics services might train for a cluster of food service occupations at the high school level. Ideally, students should be able to move from an occupational program at the high school level to a post-high school program or even a four-year program. Each of the occupational curricula, however, must lead to identifiable occupations so that when a student has completed a program, he is ready for a specific type of job.

Preparation for food service management, dietary assistants, and chefs is best done in post-secondary programs; waitress training and cook training can be done at the secondary school and/or adult levels.

TABLE 63

TEACHERS' RESPONSES CONCERNING THE NEED FOR TRAINING IN THE FOOD AREA

Occupation	Response	Respondents from		Total	
		Vocational schools	Other schools	Number	Per cent
Waitress	Much	17	26	43	36
	Some	27	16	43	36
	Little	7	12	19	16
	None	--	3	3	3
Chef	Much	6	13	19	16
	Some	12	10	22	19
	Little	21	14	35	30
	None	6	11	17	14
Food service management	Much	4	14	18	15
	Some	14	9	23	19
	Little	17	15	32	27
	None	9	11	20	17
Food service work	Much	7	17	24	20
	Some	24	10	34	29
	Little	6	16	22	19
	None	7	7	14	12
Cook	Much	9	19	28	24
	Some	27	14	41	35
	Little	9	15	24	20
	None	--	3	3	3
Dietary assistant in hospital	Much	5	11	16	14
	Some	8	11	19	16
	Little	21	7	28	24
	None	8	16	24	20

Source: SCHOOL SURVEY SERVICE questionnaires.

Because of the summer tourist industry in Montana and the greater need for food service workers at that time, training programs that offer summer cooperative work experience might be more acceptable to employers than cooperative work experience programs during the slack tourist season.

Montana home economics teachers also expressed a need for baby sitters and persons to live in with the family. The large number of single parent families and the large number of working mothers point to the need for many kinds of child-care services.

The writer found in talking with employment service directors that in the large centers of population in Montana there are shortages of child-care workers. Very few day-care centers are available for children of working parents. As a result, these children are being cared for by neighbors and friends and by adults licensed or unlicensed for family day-care services. Few persons taking care of Montana children have had training for this important responsibility, interviews revealed. No training programs for child-care workers, outside the four-year college programs and outside short baby-sitting units given in home economics classes or in the communities, were found by the writer.

High school home economics programs could help meet this shortage of child-care workers by offering training programs at the secondary school level. Young mothers, who are often rearing their own families, can take care of one or more children of working mothers. A class to train child-care aides in high school could help graduates find a source of income working at home while they are rearing their own children. While training for an occupation, students could also receive valuable training in child care which would benefit them when they have their own families.

Adult education programs, both preparatory and supplementary to employment, to train licensed family day-care service workers would help to provide more trained workers to relieve the shortage.

Although employment opportunities are now scarce for directors or assistants in licensed day-care centers because of the shortage of such centers, a one- or two-year post-secondary program to train directors and assistants might encourage the establishment of more child-care facilities.

Needs of this type, as viewed by the home economics teachers, are presented in Table 64. The greatest need seems to be for baby sitters who could live with the family.

TABLE 64

TEACHERS' RESPONSES INDICATING THEIR OPINIONS CONCERNING THE NEED FOR TRAINING IN THE CHILD-CARE AREA

Occupation	Response	Respondents from		Total	
		Vocational schools	Other schools	Number	Per cent
Nursery school assistant	Much	4	12	16	14
	Some	14	15	29	25
	Little	16	10	26	22
	None	10	14	24	20
Nurses' aide in childrens' ward	Much	5	11	16	14
	Some	9	15	24	20
	Little	14	11	25	21
	None	16	13	29	25
Camp counselors and recreation aides	Much	5	13	18	15
	Some	15	13	28	24
	Little	18	13	31	26
	None	7	11	18	15
Baby-sitting - living with family	Much	17	20	37	31
	Some	20	24	44	37
	Little	12	6	18	15
	None	--	5	5	4

Source: SCHOOL SURVEY SERVICE questionnaires.

In Table 65 are summarized teachers' responses to the need for preparation programs in the general areas of housekeeping, laundry, and management work. The need for homemakers' assistants was expressed by a larger proportion of these teachers than for the other occupations shown in Table 65. A homemaker's assistant helps the homemaker in child care or in housekeeping.

TABLE 65

TEACHERS' OPINIONS CONCERNING THE NEED FOR TRAINING IN THE HOUSEKEEPING, LAUNDRY, AND MANAGEMENT AREAS

Occupation	Response	Respondents from		Total	
		Vocational schools	Other schools	Number	Per cent
Hotel and motel maids	Much	6	16	22	19
	Some	27	15	42	36
	Little	9	9	18	15
	None	5	12	17	14
Hotel and motel housekeepers	Much	5	11	16	14
	Some	21	12	33	28
	Little	9	12	21	18
	None	11	14	25	21
Executive housekeepers in hospitals	Much	2	9	11	9
	Some	9	8	17	14
	Little	16	5	21	18
	None	18	24	42	36
Homemakers' assistant (housework)	Much	13	18	31	26
	Some	19	22	41	35
	Little	14	8	22	19
	None	--	7	7	6
Laundry and dry cleaning	Much	4	14	18	15
	Some	24	9	33	28
	Little	11	17	28	24
	None	7	9	16	14

Source: SCHOOL SURVEY SERVICE questionnaires.

Although some need for hotel and motel maids and housekeepers was indicated by teachers, motels interviewed by the writer indicated that there was very little turnover in this field and that new employees were trained on the job. This system, they said, was satisfactory.

Home economics teachers expressed an awareness of need for health occupations workers as shown in Table 66. Although health occupations are usually more related to trade and industrial education, there are opportunities for cooperation of the two services on training programs. The greatest needs in the health occupations are for practical nurses and nurses' aides.

A questionnaire seeking information as to the kinds of home services needed in their communities was sent to key homemakers. The homemakers were asked to consult friends and neighbors and club members, if possible, in order that replies would be more indicative of realistic needs. Some respondents included opinions of others as well as their own. That homemakers do need some of these services and would be willing to pay for them was clear from the replies. Table 67 summarizes the responses.

Companion aides for normal or abnormal individuals and for the convalescent or aging are apparently needed quite often. Elderly people who had this type of service available in

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their own homes might be able to maintain their own residences rather than move to retirement homes or rest homes.

Recruitment of mature women for training in adult education courses for this type of service might well be a project assumed by some volunteer community organization. A combination training program for "homemaker-home health aide" and "companion to the elderly" might offer a wide variety of employment possibilities.

TABLE 66

TEACHERS' RESPONSES CONCERNING THE NEED FOR TRAINING IN CERTAIN HEALTH OCCUPATIONS

Occupation	Response	Respondents from		Total	
		Vocational schools	Other schools	Number	Per cent
Practical nurses	Much	12	17	29	25
	Some	24	19	43	36
	Little	8	6	14	12
	None	1	8	9	8
Nurses' aides	Much	14	16	30	25
	Some	20	22	42	36
	Little	7	5	12	10
	None	5	8	13	11
Dental assistants	Much	3	8	11	9
	Some	19	17	36	31
	Little	18	8	26	22
	None	7	14	21	18
Receptionists in medical offices	Much	3	9	12	10
	Some	15	15	30	25
	Little	23	12	35	30
	None	6	10	16	14

Source: SCHOOL SURVEY SERVICE questionnaires.

Child-care workers are apparently in great need also. Whereas it is recognized that these services are especially needed for working mothers, many occasions arise in other families where short-term or even longer-term child care is needed.

Food services are apparently less in need although catering services for special occasions would appear to offer training possibilities and employment opportunities in at least two areas of the State. One key homemaker expressed needs for special food services as follows:

> A working woman might appreciate a good cook upon whom she could call for casseroles, roasts, breads, desserts to 'take in' to friends in cases of illness or death. Bakery goods are not satisfactory and emergencies have a way of occuring just at the time one is busy with previous commitments.

Some need exists for persons trained in housing and home furnishings services, and the needs for trained workers in these areas could probably be met by occasional adult education offerings.

The need for housekeeping aides of various kinds was indicated by a large number of key homemakers who believed trained persons would be employed. Adult classes or secondary education courses to train homemaker assistants or housekeeping aides would help to meet this need. Several programs are presently being conducted at the secondary school and adult levels in this area in Montana.

There appeared to be some need for clothing services. Such services would include making clothes, repairing or altering clothes, and hand laundering clothes.

TABLE 67

RESPONSES OF KEY HOMEMAKERS CONCERNING THE NEEDS IN CERTAIN HOMEMAKER SERVICE AREAS

Type of service	Per cent of respondents indicating they			
	Would pay for this service	Needed this service last year	Knew people who needed this service	Believe trained people would be employed
Companion aides for				
(a) Normal or abnormal individuals	64	35	46	79
(b) Convalescing or aging	91	49	79	98
Child-care workers				
(a) Babysitting for special occasions	83	56	98	96
(b) Day care of children	65	35	97	89
(c) 24-hour care of children	66	28	92	90
(d) Care of children in stores	26	3	28	46
Food service workers (in homes)	13	11	26	35
Caterer (Meals on wheels)				
(a) Family meals	12	13	24	21
(b) Special diets	11	28	38	34
(c) Special occasions	81	33	62	80
Consultants on selection and/or construction of home furnishings				
(a) Draperies	42	24	37	63
(b) Slip covers	34	16	27	47
(c) Cushions, pillows, etc.	19	8	18	35
Housekeeping aides (Routine tasks in care and operation of home)	84	48	93	88
Manager for home (In absence of wife or mother)	49	12	64	84
Special or seasonal help				
(a) Window washing	74	48	74	85
(b) Floor waxing and polishing	64	37	65	83
(c) Moving	66	18	57	72
Special clothing service				
(a) Repairs, make-overs, etc.	58	39	67	76
(b) Sewing clothes	55	35	61	73
(c) Hand laundering	15	6	15	17

Source: SCHOOL SURVEY SERVICE questionnaires.

Problems exist for the school district which may be interested in offering programs of various kinds for home service workers. Recruitment for some training programs are difficult as home service jobs lack prestige. Full-time employment cannot always be assured since many of these needs are for occasional workers only.

If a voluntary community organization would encourage and promote training programs for various types of home and community services and would take responsibility for employment, this would be of great assistance to homemakers. One of the difficulties in establishing training programs for some of these home-related occupations is that of making it possible for homemakers to locate these services when they are needed.

If a central hiring place for home service workers could be set up in cooperation with a volunteer organization that maintains an office and a telephone, it would help to give these occupations some prestige. These problems will need to be solved in local communities.

Margaret M. Morris told of the problems in organizing training programs in household service when she said:

> Less than a year ago, I heard about a program for training women for household service. It was slow in getting started because many people think that earning money by caring for a home and children and the elderly is a last resort occupation. However, after the first course was finished and the trainees became skilled workers with better than average pay for this work, they told their friends and relatives. Soon another course got off the ground with a capacity class.[14]

Responses to survey questionnaires sent to directors of nursing homes indicated that 50 per cent of them felt that high school preparation was adequate for the nonprofessional people employed. Seventy-eight per cent said that training in addition to high school would, however, have been helpful.

In reply to the item, "Explain how you now prepare your nonprofessional employees for their particular jobs", 67 per cent said they provided on-the-job training; 22 per cent provided inservice education; 11 per cent employed the use of manuals; 6 per cent conducted staff meetings, training sessions, and in other ways provided inservice education or on-the-job training.

Nonprofessional jobs include bed care of aged and convalescing, companionship for aged, housekeepers, house cleaners, kitchen supervisors, dishwashers, cooks, receptionists, office help, ward clerks, and laundry workers.

Four nursing homes expressed a need now for kitchen supervisors; three said they would need to employ about five persons for this occupation in the next three years. Two nursing homes needed cooks now while three homes said they would need about five persons within the next three years. One home said they would need from five to ten cooks in the next three years.

Two nursing home directors replied that the nature of jobs in nursing homes is expected to change considerably in the next five years, nine replied that the nature of the jobs would change somewhat in the next five years, and eight directors believed the nature of jobs would remain stable. Twelve directors, however, believed the quality and training requirements of newly employed nursing home personnel may be expected to increase considerably in the next five years; four said it would increase to some extent; and three, that it would remain about the same. Thirteen of the 22 respondents said they expected the number of persons needed to staff nursing homes would increase.

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[14] Margaret M. Morris, "What Is a Home Economist To Do?", Journal of Home Economics, Vol. 59, No. 9, November, 1967.

Although the responses to this questionnaire do not indicate a great need for preservice training programs designed especially for nursing home workers, it does indicate a source of employment for trained cooks, kitchen supervisors, housekeepers, companions for the aged, and other similar types of employees.

Home economics services might combine with health services in training health aides for homes and for institutions. Courses supplemental to employment might be developed to upgrade workers in nursing homes. A course in geriatrics, for example, might meet such a need. Again, home economics and health services might cooperate and build programs according to the needs of nursing homes in particular communities.

Hospitals in Baker, Glendive, Miles City, Great Falls, and Billings were contacted to see what employment opportunities existed in hospitals for persons trained in food service occupations.

The larger hospitals employ a significant number of nonprofessional employees ranging from cooks to tray girls. No minimum educational qualifications are required of trainees, and turnover of workers was reported as low in all of the hospitals except in one hospital in Great Falls. However, each of the dieticians interviewed stated that they would like to be able to hire trained workers if they were available. Several stated that new employees were often recommended by present employees. One hospital stated that when they lost their cook, they had great difficulty in finding a replacement. Several hospitals said they employed high school girls as part-time tray girls. This might provide an opportunity for work experience for high school girls studying food service training.

The writer's contacts with a number of restaurants, employment security offices, and food service establishments in Montana revealed some need for workers in this type of establishment. The demand, however, seemed not be great in most instances. In some Montana cities there seemed to be a great deal of turnover in restaurant employees. One of the greatest needs appeared to be for well-qualified "dinner cooks." There seemed to be a need also for capable dining room managers. Apparently there is need for educational programs (secondary or post-secondary) for food service workers in a cluster of occupations. Some of the manpower development training programs in Montana have demonstrated success in preparation for this occupational area.

There seems to be in Montana a real shortage of day-care facilities for children. This was attested to by employment service officers, owners or directors of child-care establishments, and school people interviewed by the writer. Generally the child-care establishments now have no minimum educational or previous work experience requirements. There is undoubtedly a need for programs of preparation or upgrading (secondary, post-secondary, or adult) for personnel for children's nurseries, child monitors, and other types of child-care personnel.

The writer, in her field work in Montana, contacted a variety of clothing establishments but found limited opportunities for employment. There is apparently a very small turnover of workers in this type of business. Because of limited opportunites for employment in established businesses, training for a cluster of clothing service occupations might offer the most possibilities to trainees. Self-employment might provide one of the best opportunities for persons with sewing capabilities.

All employment services contacted reported a demand for day workers, housekeepers (particularly live-in housekeepers), and maids. Adult classes to train workers for home and institutional services would probably meet a need in all major population areas of the State, especially where there are large numbers of working women.

Decisions concerning the initiation of occupational training programs at all levels should be made by local schools or area centers only after thorough studies, with the assistance of local advisory committees, have been made.

Concern was expressed by the State Supervisor of Home Economics over the increased load of the teacher educators in the past several years. Although no additions to the staff have been made, university enrollments of home economics education majors have doubled in the last few years. An increased full-time staff member is needed for the Montana State University, provided that efforts be made to increase graduate research studies and that additional assistance be provided the State staff with inservice education and the development of State curriculum materials. Within the next several years an additional part-time or full-time teacher educator might also be needed at the University of Montana.

According to the two State supervisors, their greatest problems are lack of time for working with schools to develop new programs, to develop curriculum materials, and to do long-term planning; need to promote change to keep home economics in tune with the times; and the slowness with which schools have been developing gainful employment programs.

Although the two State supervisors have an extremely heavy work load, they feel there is little hope for getting additional personnel at the State level. If additional staff were available, the State Supervisor says she would like someone to take the responsibility for post-secondary and adult programs. Part-time consultative help, she said, could be used for curriculum development.

The State Supervisor expressed the hope that the larger city systems, such as Billings and Great Falls, would employ half-time city supervisors of home economics education to work for the promotion, improvement, and strengthening of home economics at the secondary, adult, and post-secondary levels.

CHAPTER 4[*]

DISTRIBUTIVE AND OFFICE EDUCATION

This chapter covers the broad spectrum of education for and about business in Montana but emphasizes in separate parts the specialized fields of distributive education and office education which are deemed reimbursable under the provisions of the *Montana State Plan for Vocational Education*. The chapter is based upon the fact that business subjects have been extensively taught since the early years of this century in almost every American public high school. The total program of education for and about business must, therefore, be studied as the setting in which reimbursed programs of (a) distributive education and (b) office education are highlighted.

In this chapter the writers take the point of view of first determining *what is* and then inferring and describing *what ought to be*. To do this the writers devote a few introductory pages to the general setting and then divide the remainder of the chapter into three major parts dealing in succession with (a) distributive education (Part I), (b) office education (Part II), and (c) reactions from and observations by Montana professional and lay persons and groups concerning the programs for and about business (Part III).

Methodology Used in the Survey

Business education courses are taught in practically every Montana public high school, post-high school institution, college, and university. Business affects the everyday lives as citizens and consumers of almost all persons in Montana and is the focus of livelihood for a good share of the labor force. To gain even the most panoramic view of such a sizable program requires the use of many modes of investigation and information gathering.

The writers spent a total of 12 days in the State, interviewing school personnel and businessmen, observing schools and classes and meeting with officials in the State Department of Public Instruction and with the teacher education staff. Table 68 shows the number of individuals contacted in person, by mail questionnaires, and by personal letter requests for information relating to business education.

The survey team visited 11 high schools which represent 6 per cent of the schools and almost 40 per cent of the high school students in the State. The consultant studying distributive education surveyed personally 45 per cent of the existing distributive education programs, and the office education consultant visited 45 per cent of the schools with reimbursed vocational office education programs.

In addition, the writers of this chapter examined the results of all survey questionnaires used by other members of the Survey Staff. Documents such as the *Montana State Plan for Vocational Education* were read and analyzed as were reports submitted by teacher educators regarding their programs. Other documents used were the U. S. Census of Population, the U. S. Census of Business, and reports from the State Employment Service and local boards of school trustees.

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[*] Written principally by Peter G. Haines and Josephine Sawaia.

TABLE 68

PERSONS AND ORGANIZATIONS CONTACTED
REGARDING EDUCATION FOR BUSINESS

Organization and/or individual	Personal contact		Contact by questionnaire		
	By interview	By letter	Sent	Returned	Per cent return
Officials of the State Department of Public Instruction	3	2	1	1	100
Local businessmen and association executives	8	12	404	152	38
School administrators	11	11			
Vocational directors	3	3			
Principals of high schools which have business education departments			168	125	75
Classroom teachers:					
(a) Vocational office	12	39	39	33	85
(b) Distributive	6	13	15	14	94
(c) Other business subjects			281	135	48
University professors and teacher educators	6	8			

Source: Records of the survey team and Survey Office records.

The Development in Montana of Education for Business

Business subjects have been taught in the public high schools of the United States almost since the doors of the first high school opened. Typewriting, general business, bookkeeping, and shorthand have been parts of the curriculum of the American high school for decades. This is as true in Montana as it is in other states.

The high school business curriculum has generally been accepted by counselors, administrators, and business teachers everywhere as properly belonging in the high school because of the three aims of the subjects taught:

1. To assist pupils in obtaining preparation for everyday living by providing them with personal-use skills and by increasing their effectiveness in their economic lives as consumers and citizens

2. To help students become aware of occupational careers in the business world and explore their capacity to undertake preparation for such careers

3. To provide occupational preparation for entry-level positions in business

In teaching the subjects associated with aim #3 above, business teachers have assumed, and rightly so, that upon graduation students could obtain positions in offices. Hence, it can be said that the business curriculum for many years has been "vocational" for some pupils. But Federal and state legislation have specifically designated as vocational two fields of occupational preparation: office education and distributive education.

Before looking at these two specialized vocational areas separately, it is well to look briefly at the total business offerings in the high schools of Montana. While many of the business offerings are designed for their general education values and while some are prevocational, the total program needs to be viewed as an entity since new programs must be built on the existing base. As Table 69 indicates, enrollments in business subjects in 1966-67 in Montana high schools totaled 23,020, which is an increase over the enrollments for the two preceding years.

TABLE 69

BUSINESS EDUCATION OFFERINGS AND ENROLLMENTS IN MONTANA HIGH SCHOOLS, 1964-65* THROUGH 1966-67

Offering	Enrollment		
	1964-65	1965-66	1966-67
Typing, Personal	1,234	1,075	731
Typing I	7,268	7,393	9,261
Typing II	2,149	2,097	1,934
Subtotal	(10,651)	(10,565)	(11,926)
Shorthand I	2,559	2,430	2,449
Shorthand II	865	706	513
Notehand or Briefhand	42	42	106
Subtotal	(3,466)	(3,178)	(3,068)
Bookkeeping I	4,074	4,002	4,201
Bookeeping II	122	114	79
Record Keeping	172	237	203
Subtotal	(4,368)	(4,353)	(4,483)
Business English	18	52	29
Business Law	517	521	604
Business Machines	136	188	247
Business Mathematics	313	730	640
Economics	198	391	715
General Business	2,064	463	735
Office Practice	575	448	573
Subtotal	(3,821)	(2,793)	(3,543)
Grand total	22,306	20,889	23,020

Source: Office of the Supervisor of Business and Distributive Education, State Department of Public Instruction, Helena, Montana.

* There was no State Supervisor of Business Education in Montana prior to 1964-65; hence, the Office has no records regarding business education offerings prior to that date.

The principals of Montana high schools having business education departments were asked by questionnaire to indicate the number of full-time and part-time business education teachers in their schools. A summary of this information is shown in Table 70.

TABLE 70

THE TEACHING POSITIONS IN BUSINESS EDUCATION IN MONTANA HIGH SCHOOLS, ACCORDING TO QUESTIONNAIRE RESPONDENTS

Number of business education teachers in the school	Full-time		Part-time	
	Number	Per cent	Number	Per cent
One	80	64	27	22
Two	17	14	5	4
Three	7	6	2	2
Four	2	2	--	--
Five	3	2	--	--
More than five	3	2	--	--

Source: SCHOOL SURVEY SERVICE questionnaires.

One criterion in a quality statewide program of education for business is the existence of a vital state association for business education which conducts a comprehensive professional service program.

Montana, like most states, has a Statewide association called the Montana Business Education Association (MBEA). This organization is an affiliate of the Montana Education Association (MEA) and of the National Business Education Association. In 1966-67 the MBEA enrolled as members 94 teachers, a sizable proportion of the business teachers in the State. The MBEA holds an annual meeting one full day at regional locations. This year it began publication of a newsletter. So far as can be determined, the Association does not engage in other professional service activities found in many other states such as holding regional meetings, managing a summer conference, or sponsoring research.

Local Support for the Overall Business Education Program

Another criterion for judging the improvement of instruction of youth and adults in any instructional area is the continuing development of the competence of local personnel. This criterion means specifically that there is a continuing curriculum development program and inservice education program for business education which are planned, organized, and supported by local district administration.

Evidence providing measurement of this criterion is provided below by the use of six subcriteria and a brief evaluation in connection with each.

1. There are functioning department heads in local schools who plan, schedule, work on improving teaching, assist new teachers, etc.

Fewer than one out of six schools in Montana has a department chairman with released time to carry out the leadership role.

2. There are regular local inservice meetings and extension courses from teacher education institutions.

No such extension courses were reported in Montana. In the schools visited there was little or no evidence of inservice meetings and workshops being conducted.

3. There is interdisciplinary planning between the teachers of office education and distributive education and those in other vocational fields.

In the writers' school visitations no evidence of such activity was observed, nor were any examples reported to them.

4. Classroom teachers are involved in educational decision-making.

A broad survey of this type cannot draw sound inferences of this subcriterion, but there was little evidence of cooperative administration-teacher planning; in fact, in two of the systems visited administrative decisions regarding changes in the business programs had been apparently made yet classroom teachers were unaware of these impending changes.

5. A feedback mechanism exists which loops and interlocks teachers, administrators, and state staff.

Apparently a real communications problem exists in Montana if the survey evidence is accurate. Teachers were generally unaware of what was taking place in other school districts of the State and even in other schools in the same district. They were not well acquainted with State guidelines or general business education activities in their State. In general, teachers were operating in isolation of one another and in a highly individualistic manner. On the other hand, the vocational directors in two districts demonstrated clearly their knowledge of each teacher and his position.

6. Local school personnel are aware of, and act in concert with, a written, overall state plan of program development.

Apparently no such written plan exists at the State level, nor has a State business education advisory committee or association been in operation to develop a total plan.

PART I - THE PROGRAM OF DISTRIBUTIVE EDUCATION

The evaluation of the distributive education program in Montana was accomplished within a framework of what might be called "a total program of distributive education."

Distributive education is a program of instruction for people who are, or wish to be, engaged in the field of marketing and distribution. The field of marketing and distribution is a vast and significant part of a competitive economy. The function of marketing is to move goods and services from original producers to final consumers. To perform this function, our economy needs many kinds of marketing agencies: retailers; wholesalers; sales divisions of industrial firms and agricultural processors; transportation, advertising, and marketing research agencies; and a host of service firms such as insurance agencies, real estate brokers, banks and other financial institutions, feeding and lodging establishments, and many others. In these agencies are the distributive occupations which have been defined as:

> ...Those followed by proprietors, managers or employees engaged primarily in marketing or merchandising goods or services. Such occupations may be found in various business establishments, including, without being limited to, retailing,

> wholesaling, manufacturing, storing, transporting, financing, and risk bearing. Distributive occupations do not include trade, industrial, or office occupations.[1]

Distributive education functions through organized programs of instruction for high school youth, for post-high school youth, and for adults. It includes, according to Vocational Education Bulletin Number 1, subjects that will contribute directly to increasing the knowledge, skill, and ability of those persons engaged in distributive occupations.[2] It can include also subjects designed to train these persons for changing to a related kind of work in another distributive occupation or for promotion to a higher level distributive position.

The three basic goals of distributive education have been stated as follows:

1. To offer instruction in distribution and marketing
2. To assist in the improvement of the techniques of distribution
3. To develop an understanding of the economic and social responsibilities of those permitted to engage in distribution in a free, competitive society

A total program of distributive education is a "people-oriented" program. It serves youth and adults; those employed in distribution and those who want to be; those who as employees, supervisors, and managers want to upgrade themselves; and those who seek advancement and promotion. To do this a distributive education program must include a secondary school program, a part-time adult program, and a full-time midmanagement curriculum beyond the high school. A total program provides for many needs of the competent distributive worker or manager: basic operating skills, understanding of principles of marketing and merchandising, human relations abilities, personal-social skills, healthy occupational attitudes, and technical information about products and processes.

The basic goal of distributive education is to aid people who have career goals in distribution. It is a vocational program for those whose abilities range from lowest rank-and-file to management. Its success is measured by the development of occupational competence in each individual to the limits of his abilities and capacities.

In the United States, public high school education for careers in distribution and marketing is comparatively recent. Although some few high schools offered courses in retail selling as early as 1910, a rare few made any attempt to develop a curriculum which was decidely vocational until spurred by Federal legislation. The major impetus for distributive education came from provisions of the George-Deen Act of 1936 wherein Congress specifically provided for education for distribution and marketing and earmarked funds within the legislation for the promotion of this vocational field. Both high school and adult programs were to be developed.

The Development of Distributive Education in Montana

Montana began its vocational program in distributive education within two years after Congress enacted the George-Deen Act, which provided for this phase of vocational education. The enrollment the first year in Montana is reported as 260. The following year there was reportedly no enrollment. For each of the next three years, the enrollment was well under 100.

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[1] Administration of Vocational Education, Vocational Education Bulletin No. 1, U. S. Office of Education, 1958, p. 13.

[2] Ibid.

Specific details of the historical development of distributive education in Montana are hard to secure since few records have been kept other than enrollment data and since personnel in leadership positions have changed rather frequently. Those who were interviewed by the writers pointed out that in early years the distributive education program was in essence a work experience program and thus few local programs could have met the test of quality demanded of a vocational distributive cooperative program. It is also said that the change of State leadership several times has caused the program to show its cyclical movement. The Survey Staff is inclined to agree with both these views, but more importantly it believes that the sporadic enrollment changes reflect the fact that local administrators and counselors do not really perceive distributive education as a vocational program and that they are inclined to use it as a place to put those students who are believed best out of school for part of the day. This belief is firmly supported by the findings of a recent study.[3]

The distributive education program suffered from a lack of State leadership until the past few years when real attempts have been made to build quality into the local programs. Even yet, there is evidence that the concept of a total program of distributive education is noticeably lacking.[4] The local administrators and counselors contacted seem to perceive distributive education as a part-time work-experience device rather than as a vocational program geared to meeting career objectives in marketing and distribution. There is a lack of understanding of the need to provide a program (sequence) of instruction in the high school and the need to provide coordinator time and support to promote and organize an adult program. Bearing in mind this general conclusion about the distributive education program in Montana, attention will be given to analysis of the program components.

A number of high schools in Montana offer courses dealing with aspects of marketing and distribution; e. g., salesmanship. But these courses cannot be seen as meeting the standards of a program of vocational instruction. In 1967-68, the approved and reimbursed programs of distributive education were in 13 high schools and two post-high schools. This is a very inadequate number for a State with over 170 high schools. The number of programs seems even less adequate when one considers that three Montana cities with two high school distributive education programs each have almost one-half of such programs in the State. Adult courses in distributive education are very rare, and a continuing education program is nonexistent.

Figure 4 shows the locations of the 13 high schools and two post-high school programs of distributive education in Montana. Programs are located in only 10 of Montana's 56 counties: five in the eastern half of the State and five in the western half. It can be noted that the cities having two programs each (in two different high schools) are Billings, Great Falls, and Missoula. In Glendive, one program is in the high school, the other in the community college. At Havre the post-secondary program is at Northern Montana College.

As a part of the historical development of distributive education in Montana is the fact that distributive education teachers have formed a Montana chapter of the National Association of Distributive Education Teachers (NADET). The members contacted reported, however, that they considered it largely inactive. This type of professional organization could be of significant help in building distributive education in the State through such activities as

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[3] Glen Dean Palmer, "Opinions of Montana Secondary Administrators and Business Education Teachers on the Montana Distributive Education Program," unpublished doctoral dissertation, Montana State University, 1967.

[4] Ibid.

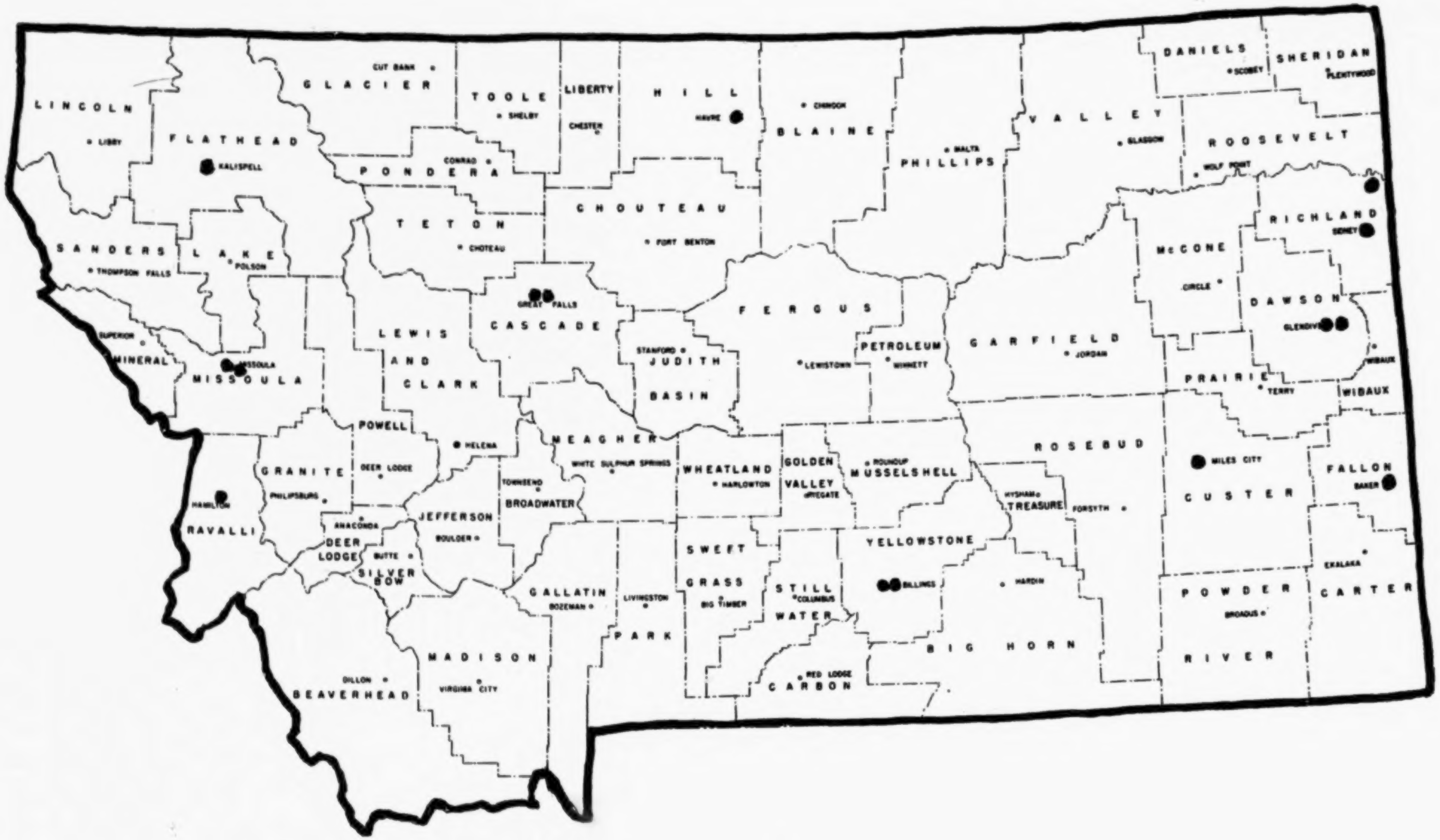
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
RICHLAND
SIDNEY
McCONE
CIRCLE
DAWSON
GLENDIVE
CASCADE
GREAT FALLS
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
GARFIELD
JORDAN
MINERAL
SUPERIOR
MISSOULA
MISSOULA
LEWIS AND CLARK
HELENA
JUDITH BASIN
STANFORD
PRAIRIE
TERRY
WIBAUX
WIBAUX
POWELL
DEER LODGE
MEAGHER
WHITE SULPHUR SPRINGS
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
ROSEBUD
FORSYTH
TREASURE
HYSHAM
CUSTER
MILES CITY
FALLON
BAKER
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
BROADWATER
TOWNSEND
JEFFERSON
BOULDER
DEER LODGE
ANACONDA
SILVER BOW
BUTTE
SWEET GRASS
BIG TIMBER
STILL WATER
COLUMBUS
YELLOWSTONE
BILLINGS
BIG HORN
HARDIN
CARTER
EKALAKA
POWDER RIVER
BROADUS
GALLATIN
BOZEMAN
PARK
LIVINGSTON
CARBON
RED LODGE
MADISON
VIRGINIA CITY
BEAVERHEAD
DILLON

Figure 4. Locations, by counties, of programs of distributive education in Montana, 1967-68

(Source: Montana's State Supervisor of Business and Distributive Education) contacting State trade associations, developing a public relations program, building a recruitment and scholarship program for future teachers, developing instructional materials, improving local practices, and in general promoting the image of distributive education.

Enrollments in and Expenditures for Distributive Education

References have been made earlier to the enrollments in the beginning years of distributive education in Montana. In Table 71 are presented enrollment data for Montana for the most recent 10-year period for which data were available. The great variations in enrollments evident in the very early years are evident also in Table 71. In only two of the subsequent years did the enrollments reach the level of 500 shown for the initial year of the period (1956-57). These erratic data may be due in part to some of the misconceptions regarding distributive education pointed out earlier and in part to a number of changes in leadership personnel at the State level.

TABLE 71

MONTANA ENROLLMENTS IN DISTRIBUTIVE EDUCATION,
1956-57 THROUGH 1965-66

School year	Number	Index*
1956-57	500	100
1957-58	411	82
1958-59	336	67
1959-60	240	48
1960-61	198	40
1961-62	273	55
1962-63	343	69
1963-64	517	103
1964-65	389	78
1965-66	544	109

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964); Office of the Montana Director of Vocational Education (Fiscal years 1965 and 1966).

* 1956-57 used as the base year (index = 100).

In Table 72 enrollment data for Montana and the 10 other Western states in the area of distributive education are shown for five years during a recent 10-year period. It can be seen that Utah, Washington, and Wyoming have been plagued with the same kind of erratic enrollment pattern as that pointed out for Montana in the discussion of Table 71. Montana is in the lower one-half of the group with respect to growth in enrollments for every year for which indexes are shown.

Montana's expenditures for distributive education for a recent 10-year period are shown in Table 73. The pattern of expenditures, like that shown earlier for enrollments, is somewhat erratic. The expenditure for the last year of the period was the highest. For each of five of the years shown, the expenditures fell below that for the opening period.

TABLE 72

ENROLLMENTS IN DISTRIBUTIVE EDUCATION IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT ENROLLMENTS, BY ALTERNATE YEARS, 1957-58 THROUGH 1963-64

State	Enrollment 1955-56	Index* of enrollment			
		1957-58	1959-60	1961-62	1963-64
Arizona	839	11	143	227	355
California	54,910	117	170	186	186
Colorado	5,606	134	133	139	122
Idaho	95	900	924	418	322
MONTANA	464	89	52	59	111
Nevada	135	187	283	203	607
New Mexico	445	164	278	149	196
Oregon	1,105	160	180	102	115
Utah	5,132	103	78	80	24
Washington	11,453	81	41	43	50
Wyoming	360	38	133	63	61
U. S. (total)	257,025	110	118	125	130

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* The base year is 1955-56 (index = 100).

TABLE 73

EXPENDITURES* FOR DISTRIBUTIVE EDUCATION IN MONTANA, 1954-55 THROUGH 1963-64

School year	Amount	Index**
1954-55	$39,341	100
1955-56	49,137	125
1956-57	46,402	118
1957-58	49,581	126
1958-59	35,122	89
1959-60	35,750	91
1960-61	34,680	88
1961-62	35,733	91
1962-63	38,929	99
1963-64	52,374	133

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1955 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1954-55 used as base year (index = 100).

Comparative data regarding expenditures for Montana and the 10 other Western states are shown in Table 74. In every year for which indexes are shown, Montana ranks 8th or lower.

TABLE 74

EXPENDITURES* FOR DISTRIBUTIVE EDUCATION IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES FOR SUBSEQUENT EXPENDITURES, BY ALTERNATE YEARS, FOR 1957-58 THROUGH 1963-64

State	Expenditures 1955-56	Index** of expenditures			
		1957-58	1959-60	1961-62	1963-64
Arizona	$ 30,160	84	209	372	619
California	556,883	124	145	178	202
Colorado	85,663	127	129	146	215
Idaho	12,342	275	323	276	428
MONTANA	49,137	101	73	73	107
Nevada	26,433	113	135	132	234
New Mexico	50,888	117	146	159	186
Oregon	75,419	131	153	153	180
Utah	41,915	97	99	79	105
Washington	144,727	140	159	206	310
Wyoming	38,580	88	45	71	120
U. S. (total)	$6,281,988	145	154	178	234

Source: U. S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* Excludes expenditures for vocational guidance.

** 1955-56 is the base year (index = 100).

The Project Plan of Instruction in Distributive Education

The project plan of instruction in distributive education utilizes group and individual projects geared to the student's career plan rather than the cooperative plan of occupational experience. The project plan is only in the experimentation stage in most states; Montana is no exception. Several Montana schools were trying out the plan in 1967-68. The project plan which emphasizes in-school laboratory instruction may be the answer to provide vocational distributive instruction in smaller schools with limited business training facilities. But there is need in Montana for a carefully worked out plan of experimentation guided by on-site monitoring by teacher educators and accorded resources for conferences, workshops, and materials development.

Adult Education for Distribution

There is a very limited program of adult education for distribution in Montana, a particularly disturbing fact because of the lack of high school programs and the preponderance of small business firms. In 1966-67 a total of only 141 persons were enrolled in reimbursed adult distributive education classes. The adult program problems apparently stem from lack of State staff time for promotion, the perception that school administrators have of high school distributive education coordinators as solely teachers, and the lack of any organization, such as a Small Business Council, to promote and carry on adult education. Contacts by the writers with leading businessmen and association executives in Montana indicated that they did not perceive the distributive education program as having an adult education function which would meet their needs.

State Level Services

One basic criterion for a successful program in distributive education is that the state staff be adequate in number of personnel and have resources adequate to a quality leadership performance.

The Montana State Supervisor of Distributive Education has responsibility for both distributive and office education, the latter responsibility having been added in 1964-65. The individual is well qualified in preparation in professional education and content in marketing and business administration as well as in experience as a teacher. At the time of the survey, he was serving in a prominent leadership role of the Distributive Education Clubs of America (DECA) and apparently had the respect of his colleagues in other state departments.

In a state the size of Montana one full-time supervisory position should be adequate for the development and maintenance of a quality program of distributive education if the teacher education personnel assist in local program development. Yet the incumbent Supervisor has been forced to lessen his work with distributive education and assume the responsibility for building a comprehensive program of office education. The double responsibility is beyond the capacity of one person.

The office space allocated to the State Supervisor is shared but adequate. Sharing a secretary with other staff is, however, a very definite handicap. The Supervisor is handicapped also by the lack of definite and published policies and guidelines regarding program development and operations. He is obviously "in the middle" when local district personnel want answers to specific questions. In short, the Supervisor must be given authority to match his responsibility.

When adequate staff time is available, the Supervisor needs to develop better support of district personnel, undertake more school consultations, work closely with other classroom teachers in developing their understanding of distributive education, and become more involved in close planning with the teacher education staff. Much more Supervisor time needs to be allocated to working with business groups and trade associations in developing the adult program.

A second criterion for a successful program of distributive education at the State level is that the teacher education program operates at both preservice and inservice levels and provides a balanced, functional program of teaching, research, and service.

One institution in the State, Montana State University, is designated for distributive teacher education. The teacher educator is very well qualified; he has a doctoral degree, experience as a teacher-coordinator and state supervisor, and adequate background in marketing. He has had many years of experience in Montana prior to assuming his present position.

The teacher education program has excellent support from its administrator.[5] Staff members in office education appeared most sympathetic to distributive education and supportive of the teacher education program. Adequate office space is provided although additional secretarial assistance will be needed as the teacher educator's role expands in research, off-campus service, and instructional materials development.

The undergraduate program is well developed, and adequate experience is given teacher trainees in technical content as well as in professional courses. Supervision of student teachers, however, needs strengthening, and several technical courses should be added to provide depth in marketing. The present supply of graduates is adequate to meet the present minimal needs of the State program, but expansion of high school programs and midmanagement programs will require at least doubling present teacher education programs. There is no question that Montana State University should provide education also for teachers who desire to move to other Western states where coordinators are in short supply.

The present teacher education program is one devoted almost entirely to training teachers at the undergraduate level. No Master's degree in distributive education exists; one is badly needed, especially one developed in close cooperation with other vocational teacher education programs wherein across-the-board leadership competence can be developed.

Practically no research has been accomplished, nor has any time been devoted to development of instructional materials for local school use. Almost no staff time is available for field visitation and consultation with local districts, for inservice meetings and conferences, or for graduate extension courses. Resources must be found to provide these services which are so essential to a complete program of distributive teacher education, and for which there is demand in local districts.

The teacher educator teaches a heavy load of courses in marketing. While this may be fortunate for students, it "ties the hands" of the teacher educator and keeps him on the campus so that essential teacher education services in the field cannot be undertaken.

The *Montana State Plan for Vocational Education* as it relates to distributive education is a broadly conceived document which briefly and generally provides for the operation of educational programs which assist youth and adults with career preparation. This broadness is commendable as an overall policy statement, yet no supporting documents are available which spell out the characteristics of desirable programs or provide policy guidelines regarding operations of local programs. As a result, local personnel report they have no baseline for operation. It is quite possible that interpretations by State personnel can change - a situation which leaves local schools in a frustrating position. If sufficient State staff are available to work closely with each local district in developing suitable programs, their precise guidelines may be unnecessary. Otherwise, published guidelines to program operation are a necessity.

Opportunities in Distribution

Businesses marketing goods and services are generally quite small as would be expected in a low-density population state. This small size firm, however, provides many opportunities for those trained in marketing functions. Few businesses have higher executives, but rely upon those classified as middle managers and supervisors. The need for people trained to perform these roles is great, and those with a two-year semiprofessional education in marketing are in demand.

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[5] The program is under the administrative leadership of the Chairman of the Department of Commerce, who has a background in distributive education.

The small size of firm also places on the manager or owner-operator a heavy burden of direct operational responsibility. This creates a great need for an adult education program which trains small businessmen in such functions as sales promotion, credit and collections, buying, and inventory control and record keeping.

Businessmen in Montana reported many employment opportunities for those with a semi-professional education who are trained in the fields of insurance, banking, wholesaling, industrial sales, hotel and restaurant management, and retailing. There is a steady demand for capable retail salespeople and for professional salesmen. The State Employment Service reports that salespeople are among the most-needed occupational titles in Montana.

Programs at the Local Level

For this section, dealing with distributive education programs at the local level, the writers have developed nine criteria. These will be indicated (numbered) one by one, and following each will be an appraisal of Montana's local programs in terms of that criterion.

1. Classroom facilities encourage participation activities, provide for enriched instruction, and allow practice in vocational skills.

First-hand observation by the writers and the questionnaire responses reveal that classroom facilities need upgrading. Most schools have some sort of retail fixtures, and in three schools visited these were almost new. But there is a lack of fixtures characteristic of modern mass merchandising, including visual display and self-selection. Further, the rooms visited were relatively small for conference-style table arrangements and for demonstrations and practice activities. Overhead projectors were in evidence, but generally storage space for instructional materials was inadequate.

Much better facilities must be provided, especially if the project plan of instruction is to be adopted. Local coordinators and their administrators need to take the initiative in persuading local merchants to donate fixtures, display equipment and props, and various business materials and supplies, including trade publications.

2. The local programs use communities resources.

Only four of the coordinators reported having an advisory committee for their distributive education program. Much more effort is needed in this direction, and important results can be obtained. For example, businessmen in their discussions with administrators and counselors, can assist in building the "case" for quality students.

About one-half of the coordinators reported having made a formal follow-up study of their graduates during the last three to five years, but the results were not available to the Survey Staff. A similar number reported having engaged in a community needs study.

Almost all coordinators reported using the services of the Montana State Employment Service. The attitude of local MSES personnel is apparently one of keen interest in the schools, and this attitude is commendable and is an advantage for local program development.

3. Businessmen furnish training station opportunities geared to program objectives.

On this criterion the coordinators who were visited reported cooperation by local businessmen generally. But several reported that local retailers were not interested in providing training stations for female students, preferring, it was said, to fill full-time sales positions with mature women who were willing to work at the minimum wage. As a result, placements of female cooperative students centered largely in service occupations, especially in food-service establishments. On the other hand, some of the difficulties in placing trainees occurred, it seemed to the survey team, as a result of selling the distributive education program as a source of "part-time help" rather than as an instructional program geared to providing career-minded employees and future supervisors and managers.

A review of training station placements in two large communites revealed a heavy emphasis in retailing and the inability to secure the cooperation of large department stores. Admittedly this situation may be atypical, but coordinators should review their programs to be sure that all types of distributive and service businesses are canvassed to ensure that education for a wide range of marketing jobs exists. Nationwide there is what the writers consider to be an unfortunate dependence upon variety stores and supermarkets as training stations, a dependence which occurs perhaps because these firms need much "part-time help" at peak volume periods.

4. Textbooks and supplementary instructional materials are adequate in supply and recency.

This program element was not checked out thoroughly by the survey team due to the panoramic nature of the survey. But in schools visited it appeared that textbooks were of recent edition. Local coordinators and their administrators should evaluate their own holdings to be sure that students have access to recent trade publications, supplementary technical texts, job manuals, and instructional bulletins published by chain stores and merchandise suppliers.[6]

5. Schools evidence written course outlines and have access to state curriculum guides.

There is no State curriculum guide for distributive education, nor are there published instructional units. Most of the schools reported that they did not have written course outlines; this creates a real concern that teachers may vary in their objectives from year to year. If course outlines are not available, then performance objectives are likely to be fuzzy, and instructional topics and teaching strategies are likely to be coincidental.

6. The local teaching staff is fully certificated and have the type of preparation requisite to quality instruction.

Local teacher-coordinators in the 13 high school programs and the two post-high school programs are all fully certificated according to records in the State Office. About one-half of them received their degrees from Montana teacher education institutions, while the others come generally from neighboring states. All but one reported an undergraduate major or minor in the field of distributive education.

Three of the 15 coordinators reported having Master's degrees, and only three reported having fewer than 10 credits beyond the Bachelor's degree. Most said they have had some occupational experience in distribution in the last five years, and six reported two years of experience in marketing since high school graduation.

Most of the coordinators are quite young and, regardless of age, are quite inexperienced. More than one-half have taught less than five years while several are in their first or second year of teaching.

In general, the teaching staff is quite well qualified by usual certification standards in distributive education.

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[6] The survey recommends that every distributive education (and office education) teacher read: Robert Mager, Developing Vocational Instruction, Palo Alto, California, Fearon Publishers, 1967 (paperback).

7. Senior cooperative student-learners are in one class created solely for them and taught by the coordinator.

Observation by the writers and reports indicate that this criterion is not being met in a number of Montana schools. One reason is that students are enrolled as potential cooperative trainees but are unemployable and cannot be placed. Others are not placed until several weeks or months have elapsed. In other cases, the course is used for students who "need an elective." Where this situation is prevalent, providing instruction of a vocational nature is difficult. Correlation of classroom activities with the job cannot occur since some students have no occupational laboratory in which to try out learnings nor have they a base of experience to bring to class discussion.

8. There is a sequence of instruction in distributive education for at least two years.

The distributive education picture in Montana schools is changing in regard to a two-year sequence. A number of schools have recently added an eleventh grade course in distribution to serve exploratory purposes and as a basic learnings experience prerequisite to the senior advanced course and cooperative laboratory experience. All schools should adopt this plan of an eleventh grade prerequisite unless a double-period senior course is adopted for selected students who, in addition, have a cooperative experience.

The project laboratory plan has not yet been introduced (except as reported in one school), but a two-hour senior laboratory may be one answer in the smaller schools where local training station opportunities are very limited.

9. The youth organization is considered an integral part of the vocational education program in distributive education.

DECA (Distributive Education Clubs of America) is considered as part of the instructional program rather than being an extraclass activity. For distributive education students the local chapter of the youth organization, along with state club and national convention activities, should contribute to the development toward the career goal. Participation in the club activities should aid in development of leadership capability and personal-social skills, should add knowledge of the occupational principles, and should sharpen job abilities through contests.

Montana became a member of the national DECA program in 1952. With able State leadership, the DECA movement has grown to where all Montana high school and post-high school programs include DECA chapters. Interviews with local businessmen give evidence that the contest program of local DECA chapters is well known to them; in fact, they refer to local distributive education high school instructional programs as "DECA Programs."

Montana high school students have taken honors in national DECA competition, including such recent honors as a divisional presidency and a first-prize contest award in 1966-67. The State Supervisor gives much of his time to providing stimulus to the State DECA program and to his service on its national board.

Although DECA is a very visible program, there is room for improvement in local schools in making the DECA activities a better vehicle for instruction wherein activities are correlated closely with classroom learning goals and student career objectives.

PART II - THE PROGRAM OF VOCATIONAL OFFICE EDUCATION

As was implied earlier in this chapter, an educationally acceptable definition of office education is difficult to formulate because of the conflict between (a) the historical devotion of business education to both general and occupational preparation and (b) the new guidelines developed as a result of Federal and State legislation. In the next paragraph, however, the writers present their perceptions of a definition of office education, together with illustrations of the occupations for which such education provided preparation. These occupations are, in reality, a part of the definition.

Office occupations education, a part of business education, has been defined as that body of subject matter and combinations of courses and practical experiences organized into programs of instruction to provide opportunities for pupils to prepare for and achieve career objectives in office occupations. The office occupations into which they may go include accounting and computing occupations; business data processing systems occupations; filing, office machines, and general office clerical occupations; information communication occupations; materials support occupations: transporting, storing, and recording; personnel training and related occupations; stenographic, secretarial, and related occupations; supervisory and administrative management occupations; typing and related occupations; and miscellaneous and office occupations not elsewhere classified.

Development of Vocational Office Education in Montana

Montana high schools have been offering business subjects for many years; undoubtedly many graduates who have had courses in typewriting, bookkeeping, and shorthand have gone on to successful careers in business firms. But until the passage of the National Vocational Education Act of 1963, which specifically provided funds for vocational office education, there was no supervisory position for office education at the State level in Montana. Thus, no records or data on high school business or vocational office enrollments are available prior to the 1964-65 school year.[7]

State approved and reimbursed programs of office education have been in existence in Montana only three years. The first year there were five such programs; the second year there were 12. In 1967-68, there were 29 programs. Figure 5 shows the location of these programs. Eleven of these programs are in the eastern half of Montana, and 18 are in the western half.

This stage of development represents a great opportunity for building high quality instruction if major resources and a major thrust are devoted to the program. On the other hand, lack of attention now is particularly dangerous since poor practices can be "locked into" programs which have the blessing of approval and reimbursement.

Enrollments in Office Education

Table 75 shows the enrollments in high school vocational office programs for the past two years and indicates that a rapid expansion is taking place. Two post-high school programs have been developed, but the adult program is almost nonexistent. These data should be interpreted with caution since they represent only those schools which have applied for vocational designation and in which certain criteria have been met. On the other hand, there are undoubtedly many schools offering business subjects[8] wherein the preparation is such that students are qualified for the job market and do indeed find positions. Such curricula are inherently vocational but are not at the present time classified as such.

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[7] According to a letter received from the State Supervisor of Business and Distributive Education, in response to a survey request for information.

[8] *Cf.* Table 69.

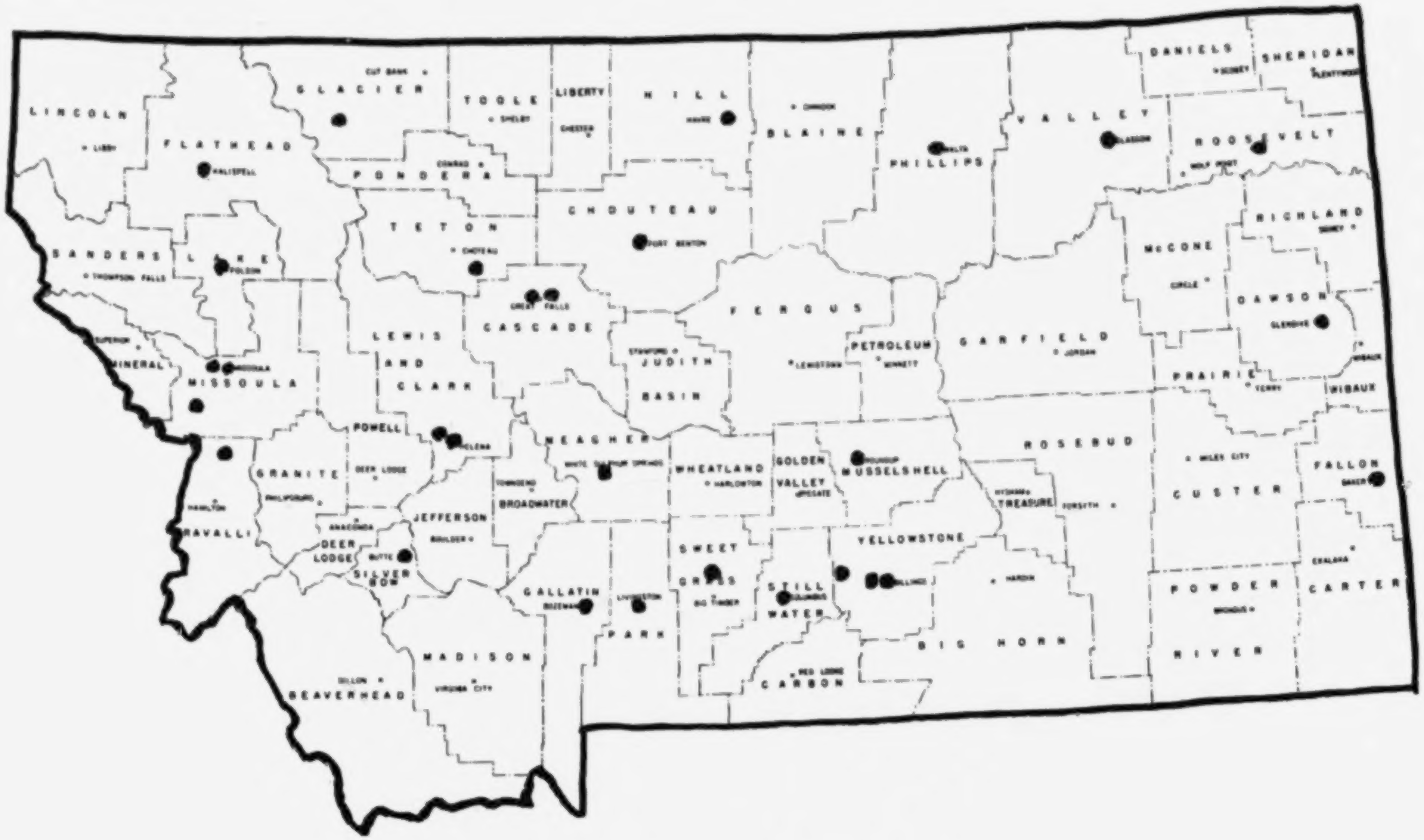
LINCOLN
FLATHEAD
GLACIER
TOOLE
LIBERTY
HILL
BLAINE
PHILLIPS
VALLEY
DANIELS
SHERIDAN
ROOSEVELT
PONDERA
TETON
CHOUTEAU
SANDERS
LAKE
MINERAL
MISSOULA
LEWIS AND CLARK
CASCADE
JUDITH BASIN
FERGUS
PETROLEUM
GARFIELD
McCONE
RICHLAND
DAWSON
PRAIRIE
WIBAUX
POWELL
GRANITE
MEAGHER
WHEATLAND
GOLDEN VALLEY
MUSSELSHELL
ROSEBUD
CUSTER
FALLON
TREASURE
RAVALLI
DEER LODGE
SILVER BOW
JEFFERSON
BROADWATER
SWEET GRASS
STILLWATER
YELLOWSTONE
BIG HORN
POWDER RIVER
CARTER
GALLATIN
PARK
CARBON
MADISON
BEAVERHEAD

Figure 5. Locations, by counties, of programs of office education in Montana, 1967-68

(Source: Montana's State Supervisor of Business and Distributive Education)

TABLE 75

ENROLLMENTS IN VOCATIONAL OFFICE EDUCATION IN MONTANA, 1965-66 AND 1966-67

School year	Number of schools	Enrollment*	
		Number	Index**
1965-66#	5	68	100
1966-67	12	345	501

Source: Office of the Supervisor of Business and Distributive Education, State Department of Public Instruction, Helena, Montana.

* Does not include two post-high school programs with an enrollment in 1966-67 of 73.

** Using the first-year enrollment as the base (index = 100).

# First year for this vocational program in Montana.

The State Level of Service

One criterion for judging a program of vocational office education at the state level is that the state staff should be adequate in number and have sufficient resources to provide a quality leadership program.

The Montana State Supervisor of Office Education was originally wholly assigned to distributive education. Since 1964-65 he has had the additional responsibility of developing a quality program of office education. A state the size of Montana needs at least one supervisory position, and desirably two, provided solely for office education. This is particularly so for two reasons: (a) the office education program is one of development rather than maintenance of an established program as might be true in other vocational services and (b) the geography of the State is such that it requires excessive amounts of travel time.

There is considerable and unmistakable evidence of the need for the establishment of a new State staff position to be exclusively concerned with office education. Schools visited and teachers contacted by questionnaire reported that they need visitations and consultation by State staff, and they expressed their need for better understanding of office education standards. There is no youth organization in office education in the State, and State leadership is needed if one is to develop. Teacher education for the office education is truly in an embryonic stage.

In short, an imperative need exists for the immediate creation of a position of State Supervisor of Office Education, along with adequate office space and travel budgets, and the authority and resources to develop new programs. If an appropriate applicant can not be found by the end of the 1968 fiscal year, a teacher educator should be asked to provide interim leadership.

Another criterion for judging the adequacy of the State-level program for office education is that the teacher education for this field produces an adequate supply of competent teachers, has both preservice and inservice programs, and devotes adequate resources to the essential functions of teaching, research, and service.

At the time of the survey there were four State institutions preparing teachers for the area of business education as we have known it in the past: Eastern Montana College, Montana State University, University of Montana, and Western Montana College. The question of preparing teachers of vocational office education, however, has not yet been resolved in Montana. This situation prevails in most states where institutions have for decades prepared business education teachers, only to be faced with the provisions of the Vocational Education Act of 1963, which provided for reimbursement for programs of vocational office education.

Both Montana State University and the University of Montana have taken steps to provide programs for teachers who desire vocational certification. In both, the undergraduate programs provide substantial preparation in business administration and economics along with depth sequences in office skills and procedures. Both institutions prepare sufficient numbers of business teachers to meet present demands. In both, several deficiencies are apparent: (a) student teaching is supervised by generalists rather than by specialists, and it is seldom in a vocational program; (b) inadequate time is devoted to helping future vocational teachers acquire occupational experience through a directed and supervised program; and (c) insufficient course work is available in philosophy, methods, and materials of vocational office education.

Programs at the other two institutions are currently geared to training teachers of nonvocational business subjects, and examination of their catalogs indicates an emphasis on secretarial subjects and accounting. Care should be exercised to avoid unnecessary duplication of training effort for teachers of vocational office education. In fact, care should be taken to avoid unnecessary duplication of preparation effort for teachers of nonvocational business courses. This should include a consideration of whether the enrollment in the program at a given institution is sufficiently large to justify the program's continuation when such preparation is available at another State college or university.

In a new program of vocational education, there is a great need to communicate to local personnel the characteristics of sound quality programs. The State Plan for office education speaks broadly of the need for office education programs which meet the needs of youth and adults. Unfortunately, after three years of reimbursing office education in Montana, there are no published guidelines for local program operation. As a result, local school personnel evidenced frustration in knowing what was desired and what standards needed to be met.

Opportunities in Office Occupations

In Montana, as in most states, qualified office workers are in demand. Especially needed are those with executive secretarial skills and those who are capable stenographers. Personnel from the State Employment Service who completed their survey questionnaires indicated stenographers to be one of the occupations for which training programs are most needed in the State. Banks and other firms demand clerical workers with machine training and attention to accuracy. Employers report a shortage of those qualified to work in data processing installations. There is a need for continuing education programs which will prepare successful employees for advancement to office management positions.

Because of the small size of most business firms in Montana, many office workers are reported to perform some recordkeeping functions. As the economy grows, more personnel will be needed who can be classified as "technical accountants"; that is, they perform those accounting functions midway between the job of the bookkeeper and those of the degree-holding accountant.

The Local Program of Instruction

In Table 76 are set forth the level of professional preparation of Montana's teachers of business education. Comparisons can be made between those teaching office education and the others in business education.

TABLE 76

LEVEL OF PROFESSIONAL PREPARATION OF MONTANA BUSINESS TEACHERS, 1967-68

Item	Per cent of respondents indicating		
	Office education teachers	Other business teachers	Total
Major or minor:			
(a) Major in OE or DE	52	41	43
(b) Minor in OE or DE	12	9	10
(c) Neither a major nor a minor in OE or DE	30	32	32
More than 18 semester credit hours in nonsecretarial business and economics courses	82	71	73
Holds a Bachelor's degree	91	76	79
Holds a Master's degree	12	19	18

Source: SCHOOL SURVEY SERVICE questionnaires.

It is difficult to determine how well qualified the vocational office education teachers really are. Vocational office certificates are a new dimension in Montana within the past three years, and no written requirements were available to the Survey Staff. Local teachers and administrators pointed out to the survey team that they did not know what the specific requirements were. This lack of policy statement makes it very difficult for teacher education programs to develop in a systematic way.

Questionnaires to business teachers revealed some facts about professional preparation characteristics of present business teachers - those teaching reimbursable office education as well as others. As Table 76 indicates, 79 per cent of all the business teachers have Bachelor's degrees. The per cent for the office education teachers alone is 91. Approximately one out of five teachers has a Master's degree. The office education teachers show up more poorly in this regard.

A complicating fact in this analysis is the number of business teachers with only a little teaching experience. Table 77 summarizes the teaching experience of the business education teachers who responded to the survey questionnaire. Almost one-half of the teachers responding have less than five years teaching experience. The office education teachers are more experienced than the other business teachers. Since the business education program in the State has been relatively stable in terms of enrollments, this implies that teacher turnover is very high. On the other hand, the large number of inexperienced teachers provides a base for developing a core of competent vocational office teachers if the proper program of teacher education activities, inservice meetings, and professional association activities can be developed.

Broadly speaking, a group of high school and post-secondary vocational office teachers should have the following characteristics:

A basic understanding of vocational education
The ability to use vocational teaching methods, especially those of the office laboratory type

An understanding of the need for curricula to prepare persons for positions from the rank-and-file level through supervisory and midmanagement levels
A perception of business education as involving more than preparation for stenographic, clerical, and bookkeeping occupations
Activity in professional associations
Interest in pushing forward a total program of office education
Activity in the business community
Utilization of the business community members as instructors
Recent and varied office experience

The survey team, making its judgment on the basis of questionnaires, visitations, and interviews, believes that a major program of teacher improvement for vocational office education in Montana must be implemented.

In passing, it should be mentioned that apparently there is in Montana no Statewide association of vocational office teachers, nor are there any regional associations. Certainly the geography of the State and the scattered population are barriers to establishing regional associations.

TABLE 77

LENGTH OF EXPERIENCE OF MONTANA TEACHERS IN TEACHING BUSINESS SUBJECTS, 1967-68

Number of years	Per cent of respondents indicating		
	Office education teachers	Other business teachers	Total
Made no response to the item	--	11	9
No prior experience	3	7	6
One year	15	10	11
Two years	12	6	7
Three years	3	9	8
Four years	--	8	7
Five years	6	2	2
Six to ten years	24	19	20
More than ten years	37	28	30

Source: SCHOOL SURVEY SERVICE questionnaires.

The Vocational Office Education Curriculum

In reality, a vocational office education curriculum does not exist. Many administrators and guidance counselors, and even some teachers, continue to talk about the "commercial subjects," a term discarded in many states years ago. There is an extremely heavy emphasis on first-year bookkeeping, first-year typewriting, and first-year shorthand.

Enrollments from first-year to second-year courses show the following decreases (See Table 69 data for 1966-67):

Subject	Decrease
Typewriting	9,261 down to 1,934
Shorthand	2,449 down to 513
Bookkeeping	4,201 down to 79

Admittedly the large number of small schools does not permit teaching advanced courses, but many of these advanced learnings can be grouped in senior office laboratory courses in large schools as well as in small. The dearth of office machines and office practice is alarming because it is these types of courses which can lead to vocational competency.

If the existing high school curriculum offerings in Montana continue, most vocational office education, worthy of the name, will need to be placed in post-secondary schools. But this should not be the substitute for youngsters of modest means who need to enter employment upon high school graduation.

Cooperative Office Education

Cooperative office education is new to Montana educational efforts, and only four high schools had adopted this plan of instruction by 1967-68. Below are listed five characteristics of a program of cooperative office education and the extent to which the group of four Montana high schools exemplify these characteristics.

Characteristic	Number of schools exemplifying it
Students belong to a youth club	0
The Coordinator has at least one-half hour per student per week for coordination	4
An advisory committee is used	2
All cooperative student-learners are enrolled in one course which is taught by the Coordinator	4
Some class assignments are geared to the student's career objective and to his training job	4

Employers interviewed by the survey team in one community were enthusiastic about the cooperative education idea, and in that city the Coordinator was doing a good job of visitation to local firms. However, as the program enrollment per school increases, care will have to be taken to ensure adequate coordination time.

Cooperative education should be used widely in Montana, and it certainly should be a part of the curriculum in all high schools with an enrollment of at least 400 since it will aid in solving the problem of specialized training and specialized equipment in the schools, especially the smaller ones. For example, a few students can learn under supervision coupled with individual instruction in the related class such things as key punch operation, the keeping of unit record systems, the operation of bookkeeping machines, and legal and medical secretarial procedures. Care should be taken to ensure that (a) instruction in the related class is geared to defined career goals, (b) a youth club is an integral part of the class instruction, (c) the related class is seen as a capstone laboratory experience, and (d) effective instruction is given by the employer.

A plan should be developed wherein the State staff would organize and reimburse limited and supervised work experience programs in small schools. For example, in one small school visited only a few training stations were available, but these were divided among students for part of the year and were providing sound vocational instruction. Some supervised occupational experience is demonstrably useful in helping students from small schools in rural areas adjust to the employment situations which they encounter in cities. Care should be taken, however, to guarantee that cooperative experiences in office programs are directed by a certificated office education teacher.

There is no question but that cooperative occupational experience must be a vital part of all Montana post-high school programs, particularly those for subprofessional occupations and those of a specialized nature such as medical secretarial. In some cases this experience can be on a full-time basis for a term in a larger community, provided adequate supervision is given.

Instructional Equipment and Facilities

The classroom equipment and facilities for vocational office education should be measured against the criterion that classroom equipment is up to date, represents the standard of the business office, and assists in simulation practice and individualized instruction.

The classroom facilities were observed in 12 Montana schools and evaluations of them reported through survey questionnaires by a majority of schools.[9] The survey team observed much equipment (especially typewriters) to be new and contemporary, apparently often the result of the use of funds provided by the Vocational Education Act of 1963.

Table 78 shows the reported availability of equipment. Shorthand dictation practice equipment is quite available. But more than one-half the schools do not possess posture

TABLE 78

MACHINES AND EQUIPMENT AVAILABLE IN THE BUSINESS EDUCATION CLASSROOMS OF MONTANA HIGH SCHOOLS, 1967-68

Type of machine or equipment	Per cent of schools reporting they have	
	Schools having OE and/or DE	Other schools
Shorthand dictation practice equipment:		
(a) Tape console with individual listening station	38	11
(b) Tape recorders	66	72
(c) Record player	69	72
Posture chairs	48	43
Adjustable typewriter tables	59	38
L-shaped tables for vocational courses	21	9
Blank keyboards	45	45
EDL controlled pacer	10	3
Advanced typewriting classes have:		
(a) No electric typewriters	--	14
(b) Some electric typewriters, but no more than one-third	52	49
(c) At least one-half are electric	21	14
(d) All are electric	21	11

Source: SCHOOL SURVEY SERVICE questionnaires.

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[9] Those schools not reporting are typically very small and unlikely to be greatly involved in vocational office instruction.

chairs. Many lack adjustable typewriter tables. There are serious weaknesses. Moreover, only one out of five schools has L-shaped secretarial desks, which are considered highly useful for advanced office laboratory training. If model office simulations are to be used, these items of equipment are requisite to vocational instruction.

The serious lack of electric typewriters as shown by Table 77 is not in harmony with advanced office training or with the observed use of electric machines in Montana business offices.

In general, it is apparent that considerable resources will have to be channeled into equipment acquisition if quality vocational office education is to result.

The Application of Criteria to Montana's Local Program of Office Education

1. A vocational office education program must exhibit a variety of characteristics accepted by educational authorities as appropriate for such a program.

These characteristics are listed in Table 79, and for each is shown the extent to which the principals of high schools with business education departments who responded to the survey questionnaire indicated its presence in their schools in Montana. For all the listed characteristics, the schools having programs of office or distributive education showed up better than did the other schools. In even this group, however, there were only three of the

TABLE 79

DEGREE TO WHICH HIGH SCHOOL BUSINESS PROGRAMS HAVE CERTAIN CHARACTERISTICS OF VOCATIONAL OFFICE PROGRAMS, 1967-68

Characteristic	Per cent of schools reporting they have	
	Schools having OE and/or DE	Other schools
An advisory committee is used	31	5
An office education youth club is part of the program	10	1
A follow-study of graduates has been made during the last 3-5 years	59	28
A community survey of needs has been conducted within the past 3-5 years	48	20
The school has engaged in a formal curriculum study within the past 3-5 years	35	10
There is a planned and budgeted machine repair and replacement schedule	79	60
There is a formal placement service for graduates	3	1
A teacher has released time from classes to devote to supervisory and leadership responsibilities for the department	35	11
There are required sequences of courses for majors in office education	62	19

Source: SCHOOL SURVEY SERVICE questionnaires.

characteristics that were reported as present in more than 50 per cent of the schools represented by the respondents.

School administrators, teachers, and others in Montana who believe in vocational preparation should be concerned that so many of the schools do not require majors to follow a sequence of courses. "Cafeteria selection" of courses cannot ensure that graduates will be well trained in the essential elements of the occupation. Furthermore, course planning and instruction are hampered when students may elect courses out of sequence.

Other serious weaknesses which must be corrected if programs are to be truly vocational (and indeed meet the intent of the Federal law) are the lack of advisory committees and the absence of an office youth group which should be an integral part of the instructional program.

2. Business education programs evidence the use of instructional and community resources to enhance instruction.

Montana high schools do not use these resources as extensively as one would desire as indicated in Table 80, which summarizes responses of principals of high schools with business departments. For example, many schools report having no written outlines for each course. This is a dangerous situation for two reasons: (a) teachers in two sections of the same course could have widely varying objectives and teachers in one course have no guarantee of what may take place in the preceding course, and (b) without written course outlines there is no plan and consequently the teacher may be lured into teaching what he likes, what is pleasant, or what is thought to be needed.

TABLE 80

DEGREE TO WHICH HIGH SCHOOL BUSINESS EDUCATION PROGRAMS IN THE STATE EXHIBIT THE USE OF CERTAIN INSTRUCTIONAL AND COMMUNITY RESOURCES, 1967-68

Type of resource	Per cent of schools reporting they have	
	Schools having OE and/or DE	Other schools
There are written outlines for each course with teaching suggestions	59	36
A booklet is given to students and parents describing each course offered	45	14
Students are tested on GATB by the Montana State Employment Service	79	54
An annual career day is held	65	42
Frequent use is made of field trips and of speakers from the community	52	22

Source: SCHOOL SURVEY SERVICE questionnaires.

On the other hand, the extensive use of the Montana State Employment Service is very commendable. In many states the degree of cooperation in student testing would be much less. During on-site observation, the survey team found the MSES personnel to be knowledgeable about schools in their area and much interested in helping build programs of office education.

The fact that so few schools reported having guidance booklets available for students and parents is one more piece of evidence of the very great need to improve the counselors' understanding of business occupations and business education. Teachers commented frequently in person to the survey team and in writing to it about what they considered the abuse of the counseling function by enrolling in business courses students without the necessary aspiration and motivation and without the capacity to profit from the instruction.

3. The youth organization is considered an integral part of the vocational education program.

Two youth organizations exist on a national scale in the field of office education. One, FBLA (Future Business Leaders of America) has been in operation for over 20 years. It is an across-the-board type of organization, catering to all students (grades 9-12) who have an interest in, or are enrolled in, any business course. The second organization is OEA (Office Education Club of America), which is but a few years old and which is exclusively geared to those who by definition are vocational office education students.

The office of the State Supervisor as it operated at the time of the survey provided no direct leadership for either organization. A survey of Montana high schools revealed that only two reported that a local chapter of a youth organization is indeed an integral part of vocational office instruction; therefore, a strong leadership dimension is needed at the State and local levels to overcome this vacuum.

4. The vocational office education curriculum is capped by a senior laboratory experience through either cooperative education or an in-school laboratory plan.

Very few high schools in Montana have either a cooperative office education program or a genuine senior laboratory course. A few reportedly are using two periods arranged as a block of time. The program is just beginning in Montana, and apparently as of now the senior laboratory course emphasizes office machines plus speed-building and transcription practice, filing, duplicating, and production typewriting.

Table 81 reflects the types of experiences provided to business education students which approach the true senior laboratory. The data in this table were provided by the Montana teachers in their questionnaire responses.

If quality is to be built into this developing program, the senior laboratory course should emphasize skill development based on individual needs, provide training in human relations and office systems and procedures, provide practice on integrated tasks, and give students a simulated experience through a model office set.

5. Adequate skill-building and practice on production tasks are given in skill courses.

The nature of shorthand instruction can be briefly described even in a panoramic survey of this type by concentrating on a few instructional characteristics which are indicative of quality instruction for vocational purposes. For example, a large proportion of the high schools reported having some form of shorthand dictation practice equipment and several have language-type consoles with individual listening stations for shorthand practice. This situation is probably better than would be found in many states and surprisingly good for a State with such a large proportion of small schools.

About 70 per cent of the schools reported that the dictation practice equipment is available for first-year shorthand classes while 50 per cent reported its being available to second-year students. In addition, over one-half of the schools said that the practice equipment is available to students during study halls and after school hours.

TABLE 81

OFFICE LABORATORY EXPERIENCES IN THE BUSINESS EDUCATION PROGRAMS OF THE HIGH SCHOOLS IN MONTANA, 1967-68

Type of laboratory experience	Per cent of schools indicating	
	Those with OE and/or DE	Others
There is a senior laboratory experience using a block-time approach	48	4
There is an office practice course for:		
(a) clerical students	24	16
(b) stenographic students	38	6
(c) low-achievers	3	3
No office practice course is offered	28	57
An office practice set is used which simulates an actual office for a week or more	38	30
There is a separate office machines course	21	10
Office practice is on a:		
(a) rotation plan	59	21
(b) battery plan	17	11

Source: SCHOOL SURVEY SERVICE questionnaires.

Transcription on the typewriter is introduced quite early in Montana high schools, with about one-fourth introducing it during the first semester as a part of the concentration on theory lessons. More than 50 per cent of the schools introduce transcription practice during the second semester, while only a few delay the introduction of this practice until the second year.

Fewer than 20 per cent of the schools provide instructional time for shorthand speed-building and transcription practice in other courses, typically in office practice. Transcription evaluation in more than 42 per cent of the schools is based on 95 per cent accuracy and on mailability. In 52 per cent, office style dictation is widely practiced, with more than 75 per cent of the schools reporting its use.

In some states the second year of typewriting is considered a vocational course if practice is given on production tasks and if instruction is provided in related clerical skills. More than 54 per cent of the responding schools offered second-year typewriting. Enrollments in this course were reported to be approximately 1,900 students. Montana teachers report using the course for other needs as follows:

Other use	Per cent so indicating
Use of transcribing machines	25
Use of ten-key listing machines for solution	26
Practice on simulated keypunch keyboards	6
Letter composition	68
Instruction in duplicating	69

PART III - ADDITIONAL REACTIONS FROM AND OBSERVATIONS BY MONTANA LAY AND PROFESSIONAL PERSONS AND GROUPS

In assessing the needs for the further development of education for business in Montana, it is important to create a picture of opinion. In the beliefs of people lies either a springboard for change or, unfortunately, a barrier to progress.

The attitudes of Montana business teachers, counselors, administrators, and businessmen were surveyed to obtain a picture of their beliefs in three areas:

1. What should be the goals and objectives of the total educational program in business through grade 14? How well are schools now performing?

2. What are the needs for post-high school education for business? What institutions might best provide for these needs?

3. What services and instructional system components are needed to improve the quality of the existing program?

It should be pointed out here that the material presented in Part III deals with both distributive education and office education. Materials dealing separately with the two programs were presented in Parts I and II.

Relative Emphasis on General and Vocational Education

In the contemporary secondary school of the United States there is typically much debate and, at times, strong disagreement as to what degree of emphasis should be placed upon general education for life as opposed to preparation for college specialization or specialization for occupational competence upon graduation. One way of assessing the beliefs of office and distributive education teachers about this relative emphasis is to measure their opinions in terms of the number of Carnegie units which might be given to occupational preparation.

Montana high school business education teachers were asked, "If one could assume a four-year high school curriculum of 20 units, how many might be devoted to occupational preparation without harming preparation of the individual for general education for everyday living?" Their responses follow.

Number of units a student could devote to occupational preparation without harming preparation for general education	Per cent of respondents
More than 10 units	3
10 units	20
Eight or nine units	14
Six or seven units	27
Five units	27
No more than four units	9

From the data shown above, it appears that approximately two-thirds of them believe that students could safely devote at least six or seven units (about one-third of the 20 needed for the four-year curriculum) to occupational preparation. This proportion of the total number of units is quite adequate for developing entry job competence in office and distributive occupations if the curriculum is pruned of nonessentials and duplication and if the instructional facilities, staff, and resources are at least adequate. It should be pointed out also that sound vocational instruction ought to bring about many desirable general education outcomes; for example, improved self-concept, personality improvement, oral and spoken communication, and economic understandings.

Sixty per cent of the questionnaire respondents indicated that they believed a course in general business in grade 9 or 10 is fundamental for those who wish occupational preparation for office or distribution work. Such a course has many general education values also. Following are shown some of the additional reactions made concerning this type of course.

Comments about a general business course	No. of respondents
Course should give background for personal use as well as to help students make career choices	13
It should be required for all pupils in grades 9 and 10	6
Such a course would help pupils become familiar with the vocabulary of business	6
Some need it, some don't	5
Such a course is fine if it isn't geared to those of lesser ability	5
General business knowledge will come with the development of basic skills	4

The Goals of High School Vocational Programs

Program development for the future will rest on the base of goals and objectives of teachers; where goals are limited, expansion will be hampered. And the question of post-high school development can be greatly affected by the perceptions teachers have of the high school programs. If teachers believe that the high school preparation is adequate for job entry and advancement, then they are unlikely to support post-high institutions and will guide students accordingly.

In Table 82 are summarized the responses of Montana business education teachers to the survey questionnaire item dealing with the goals of their programs. The goal most emphasized by the responding teachers is that of preparing students for both entry-level positions (and initial advancement) without any need for further preparation as, for example, in a post-secondary institution. There is practically no inclination to leave all shorthand and distributive education for post-high school. Only one out of five teachers was inclined to see the high school as a vehicle for general and personal-use business education or for vocational training limited solely to clerical positions. It is possible that business teachers are overestimating the level of preparation their program is providing or that they are reluctant to view much of vocational education as belonging in a post-high institution. On the other hand, the problem may be semantic. There is some evidence that teachers see any advanced (beyond rank-and-file job) preparation such as executive secretarial as the proper province of the collegiate institution - an unfortunate view.

Most business teachers recognize that their schools provide no preparation for data processing and little effective preparation for distribution and sales.

After the item in the survey questionnaire which dealt with goals, the business education teachers were asked to indicate how well they thought their programs were preparing their students for jobs upon graduation. The results are summarized in Table 83 for five different types of positions. The weakest area, as pointed out earlier, is that of preparing well-qualified graduates for date processing, which in the nation is becoming one of the leading occupational areas. For all other types of positions, at least one-third of the respondents indicated that they believe their graduates are well qualified for job entry.

TABLE 82

BELIEFS OF THE MONTANA BUSINESS EDUCATION TEACHERS (1967-68) REGARDING THE DESIRED GOALS OF THE OFFICE AND DISTRIBUTIVE EDUCATION CURRICULA IN THEIR SCHOOLS

Goal	Respondents indicating	
	Number	Per cent
To provide primarily for entry-level positions	56	34
To provide for clerical training and postpone all shorthand and distributive education until post-high school	2	1
To provide for personal use and general business skills and knowledges only, leaving all vocational office education and distributive education to the post-high school	30	19
To prepare most students for both entry level and initial advancement without their needing further training	75	46

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 83

BELIEFS OF THE 1967-68 MONTANA HIGH SCHOOL OFFICE AND DISTRIBUTIVE EDUCATION TEACHERS REGARDING HOW WELL THEIR PRESENT CURRICULUM PREPARES MOST OF THEIR STUDENTS FOR JOBS UPON GRADUATION

Type of position	Number of respondents*	Per cent of respondents indicating		
		Minimally qualified for entry jobs	Well qualified for entry	Has background for advancement without further training
Stenographic	150	50	33	17
Clerical	146	48	37	15
Data processing	27	96	--	4
Bookkeeping	159	55	37	8
Sales	61	44	44	12

Source: SCHOOL SURVEY SERVICE questionnaires.

* The remainder of the 181 respondents indicated that their schools do not prepare for these types of positions.

Montana high school teachers expressed their opinions of how to improve their curriculum and instruction in attempting to meet their high school goals in office and distributive education (both vocational programs). In the survey questionnaires sent to them, teachers were asked to react to each of eight listed techniques which might be utilized for instructional or curriculum improvement. The resulting responses are summarized in Table 84. It can be seen that their greatest response was for the summer workshop approach. They apparently have least faith in teacher visitations to business firms and other schools.

TABLE 84

CURRICULUM IMPROVEMENT TECHNIQUES PERCEIVED BY MONTANA BUSINESS EDUCATION TEACHERS AS NEEDED IN THEIR SCHOOLS, 1967-68

Curriculum improvement technique	Respondents approving	
	Number	Per cent
Several one-day methods conferences in local area	93	51
Summer office and/or distributive education workshops	119	66
Summer workshop for guidance counselors regarding occupational education	103	57
Extension* courses for graduate credit	109	60
Local inservice courses for business teachers	48	27
Regular visitation by State staff and teacher educators	47	26
Teacher visitation days to business firms and other schools	43	24
Summer work experience for teachers of office and/or distributive education	98	54

Source: SCHOOL SURVEY SERVICE questionnaires.

* Extension courses for teachers.

Need for Post-Secondary Education

Survey evidence demonstrates very well that high school curricula in office and distributive education in Montana need much expansion and upgrading. This situation is not a revelation to the leaders in the State. The crucial question, however, is really the post-high school program, and here a major problem exists. The problem is a great lack of understanding about the scope of business education, the demands of subprofessional positions in business, and the function and role of post-secondary institutions. The evidence is clear that many business teachers, administrators, and businessmen think an area vocational school is a "trade school," designed to train dropouts and the unemployed for entry-level business positions. There is also apparently some reluctance to invade what is considered the province of the proprietary school and the two-year vocational curricula of the system of higher education.

In Table 85 are summarized the responses of business education teachers concerning two major types of vocational education need to be met by area or regional schools in Montana.

There appears to be a stronger belief that the so-called area school can serve better the graduates of high schools and school dropouts than it can the high school enrollees as far as distributive and office education is concerned. It should be emphasized in passing that the Montana respondents have undoubtedly based their responses on their knowledge of the Montana type of area school (such as those at Helena and Missoula).

TABLE 85

THE NEED FOR AREA VOCATIONAL SCHOOLS AS PERCEIVED BY THE 1967-68 MONTANA BUSINESS EDUCATION TEACHERS

Type of area school need	Per cent of respondents indicating		
	Agree it is needed	Disagree	Don't know
For vocational education in office education and/or distributive education for high school students who might attend part time	67	16	17
For vocational education in office education and/or distributive education for those who have dropped out of school or for those who have graduated without office or distributive education	81	4	15

Source: SCHOOL SURVEY SERVICE questionnaires.

The questionnaire responses of Montana teachers of business education regarding the more specific types of vocational program that should be offered in post-secondary schools are summarized in Table 86. Again the weight of response is for the high school graduate or dropout preparing himself for job entry through full-time intensive post-secondary programs. There appears to be less desire for subprofessional type programs leading to Associate degrees.

Table 87 summarizes business teachers' responses to more specific items in the questionnaire dealing with post-secondary programs were such schools to be established in the respondent's section of the State. Teachers strongly support for post-high institutions the offering of the very curricula (clerical, stenographic, bookkeeping) that they also say they believe is the major goal of the high school and in which they reported they are doing a good job. Little support is given to installing curricula which provide for (a) higher level business positions, such as technical accounting, data processing, sales, and executive secretarial, or for (b) midmanagement positions in wholesaling, retailing, finance, and office management.

On the other hand, businessmen greatly favor educational programs which will prepare young people and adults for subprofessional positions. Businessmen and trade association executives report a strong need for retail managers, data processing specialists, executive secretaries, supervisors and managers for tourism firms, agribusiness personnel, and mid-range accounting people.

In many states which have contemplated an expansion and improvement of occupational preparation for business for those who have dropped out of, or graduated from, high school, there has been much discussion about what type of institution would be most appropriate. Montana business teachers were surveyed as to whether they felt that this preparation might be better provided by a junior or community college institution or by a system of separate vocational-technical schools. of the 160 teachers who responded, 61 per cent favored separate vocational-technical schools as contrasted with 12 per cent who supported the junior or community college idea. There were 27 per cent who replied that they "didn't know."

TABLE 86

OPINIONS OF MONTANA BUSINESS EDUCATION TEACHERS (1967-68) REGARDING THE TYPE OF PROGRAMS WHICH WOULD BE APPROPRIATE IN POST-SECONDARY INSTITUTIONS

Type of program	Per cent of respondents indicating		
	Must offer	Could offer	Should not offer
Intensive 3-9 month programs, full-time for high school graduates or dropouts, giving entry-level skills	59	38	3
One- or two-year, full-time programs giving technical training for business but little general education (not collegiate credit)	35	55	10
Two-year Associate degree curricula providing education for subprofessional jobs in business	18	62	20
Adult education, part time to build skills and prepare for advancement those already working	48	48	4
Intensive, full-time retraining programs	33	56	11

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 87

OPINIONS OF THE 1967-68 MONTANA BUSINESS EDUCATION TEACHERS AS TO CURRICULA NEEDED IF A POST-HIGH SCHOOL INSTITUTION IS ESTABLISHED IN THEIR SECTION OF THE STATE

Occupational area	Per cent of respondents indicating		
	Must be offered at start	Offer when school expands	Not important
Clerical-typist	93	5	2
Stenographic	83	16	1
Executive secretarial	13	78	9
Bookkeeper	89	9	2
Junior accountant	27	65	8
Retail sales	51	44	5
Outside salesman	31	49	20
Office manager	15	66	19
Midmanager in distributive firm	14	63	23
Data processing	51	42	7

Source: SCHOOL SURVEY SERVICE questionnaires.

From this and other questions directed through the questionnaires and from personal interviews, the survey team is inclined to believe that many Montana teachers are not yet oriented to various approaches to providing vocational-technical education. Their understanding of the possible types of institutions, advantages and disadvantages of each, and the range of educational programming is probably at this point too limited for their opinions to be fully valid. There are many signs that Montana business teachers need to know more about post-high school education in the nation and need many opportunities to discuss various alternatives after they have gained sufficient knowledge.

Montana has a low-density population. Unlike the rural areas of some states where schools are often but 10-15 miles apart, schools in Montana are far apart, and small schools often are an hour or more bus ride from even a small community of 5,000 to 10,000. In states where schools are close together, quality high school vocational education in office education and distributive education can be accomplished through area vocational programs. In Montana, this is not the answer; instead citizens are faced with the difficult choice in most areas of either (a) delaying all vocational office and distributive education until after high school graduation or (b) providing as much of it as possible in small high schools even for minimal numbers of students. The writers prefer the latter choice since deferring all vocational education and charging a high tuition as well as room and board will cause some youth not to be able to afford an education of this type.

The Montana business economy and the need of the adult labor force for job success and career advancement require that the post-high school program be established with several goals of parallel importance. These are as follows:

1. Intensive training in short-term programs to provide entry-level preparation for those whose schools did not provide training or those who chose not to profit from it. These programs should concentrate on essential job skills and knowledges in order to get people to work quickly.

2. One-year (approximate) curricula for a cluster of occupations and providing graduates with chances of advancement.

3. Two-year (approximate) curricula for subprofessional business positions. These programs should provide not only technical (skill) preparation but also conceptual business education as well as sound general education essential to management and supervisory positions. Graduates should be able to enter advanced positions and have the opportunity for advancement to management.

4. Adult courses to meet specific job skill needs such as shorthand refresher, show card writing, cashier-checker training, key punch operator, selling techniques, better business English, office procedures, front office procedures, and waitress training.

5. A continuing adult program to develop small business management skills such as how to supervise, small business recordkeeping, successful sales promotion, office management, buying for small business, records management, and personnel management.

The writers believe that opportunities in distributive occupations in Montana are too limited to support highly specialized post-secondary curricula such as fashion merchandising, appliance retailing, and the like. Yet students should be provided the opportunity to pursue specialized career goals through the addition to the marketing curriculum of independent studies, selective internships, and individual projects. Where sufficient numbers are available a special course can be added as an elective; e.g., Basic Fashion Merchandising or Insurance Fundamentals.

Within the secretarial curriculum, specialized sequences of courses, individual studies, and internships should be provided, where needed, to give opportunities to pursue career interests such as legal secretary and medical secretary. But specialized curricula in these areas should be developed in only one major center to serve Statewide interests.

CHAPTER 5*

TRADE AND INDUSTRIAL AND TECHNICAL EDUCATION

The two programs, (a) trade and industrial education and (b) technical education, are considered to be closely related - in fact, elements in the same series - and are, therefore, presented in this report as parts of a single chapter. Distinguishing characteristics of the two areas are difficult to identify - in part a reflection of the close relationship; however, it is commonly acknowledged that technical courses place a greater emphasis upon science and mathematics. This does not mean that trade and industrial courses are devoid of science and mathematics, but it does mean that the occupations that comprise the area of technical education depend in a larger sense upon competencies in science and mathematics.

A familiar diagram, presented as Figure 6, explains the relationship of the two areas of development.

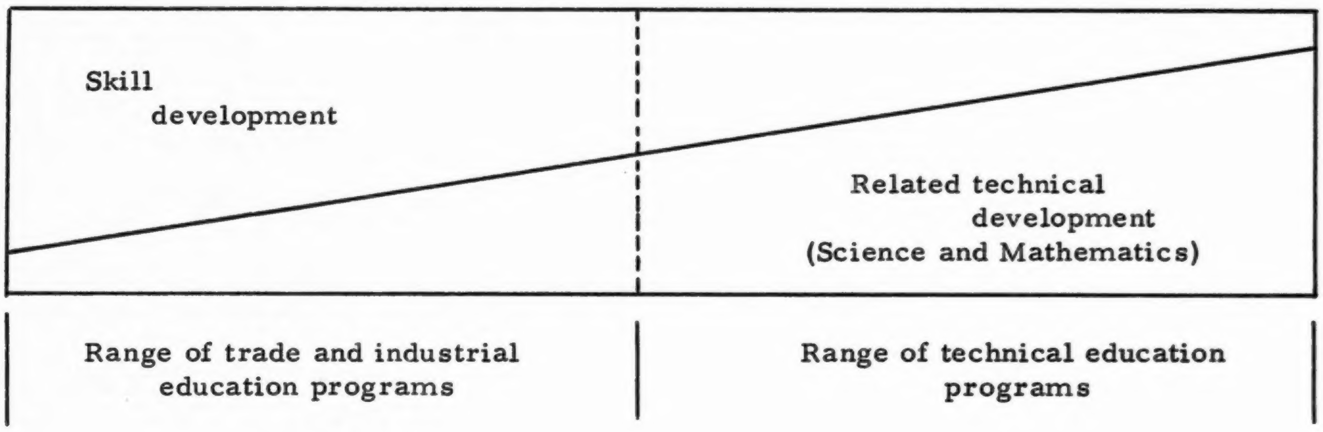
Skill development
Related technical development (Science and Mathematics)
Range of trade and industrial education programs
Range of technical education programs

Figure 6. The relationship of trade and industrial education and technical education as regards the emphasis on science and mathematics

In Figure 6 the interface, where trade and industrial education ends and technical education begins, is not clearly defined - a further example of the close relationship of the two areas.

Despite the close relationship, the two areas are discussed separately in Chapter 5 in order to emphasize the unique aspects of each. Many of the points of view presented in the description of trade and industrial education, however, apply to the technical education program as well.

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*Written principally by Samuel L. Fick and Melvin L. Barlow.

PART I - TRADE AND INDUSTRIAL EDUCATION

The first part of this chapter is devoted to trade and industrial education, which is one of the very important kinds of vocational programs. Important as it is, people of many communities throughout the United States have been slow to recognize the relationship of this form of education to the American economy. Trade and industrial education must keep pace with the many changes in industry and recognize that what was acceptable yesterday could easily be obsolete tomorrow.

The degree to which America has become industrialized and the need for familiarization with the many technologies are well known to all. Industrialization has become our way of life; in fact, we all look forward to new industrial inventions and technologies which could easily make our lives more comfortable. This being the case, educators, industrialists, and people of our many communities should strive for a vigorous program of education in the trade and industrial field.

Trade and Industrial Education - A Need in Montana

According to the 1960 Census of Montana, craftsmen and kindred workers represent 12.3 per cent of the employed persons in the State.[1] At that time this group represented the largest segment of the working population of Montana. This means that a sizable portion of the people of Montana earn their living in occupations related to the trades and industries. Gaining employment in any of these fields is facilitated by special training and experience which can and should be supplied by the public schools. The employed worker is often faced with technological changes in his work and needs supplemental training which will keep him abreast of up-to-date methods and procedures. Public vocational education can and should furnish courses for these individuals also.

Trade and industrial education provides youth and adults instruction of a preparatory or extension type in the development of basic skills, technical and related knowledge, safety habits, and trade judgment to fit persons for useful employment in trades, industrial pursuits, and other related occupations.

Trade and industrial education offers many opportunities for education in a variety of industrial occupations. Students who are enrolled full time in school may prepare for useful employment in an industrial occupation and may also complete their general education courses. Youth who have left full-time school, or adults, may receive intensive training leading to employment. The student who is employed part time may also receive training in the occupation in which he is employed and at the same time attend school and complete his general education. Apprentices in trade and industrial occupations may receive related and supplemental instruction which is related to their job experiences. Employed trade and industrial workers, including foremen and supervisors, may be given instruction supplementing their daily employment. There is also opportunity for persons over 16 years of age to receive training in mathematics, science, related drawing, and advanced technical skills which relate to their daily employment.

Trade and industrial education includes practical nursing education and preparation for other nonprofessional health occupations.

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[1] U.S. Department of Commerce, Bureau of Census, "U.S. Census of Population, 1960: Montana, General Social and Economic Characteristics."

Trade and industrial education furnishes many people of our nation with the knowledge, techniques, and skills which enable them to help solve many of our national problems and, at the same time, take their place in our industrial society as satisfied workers.

Industrial Arts Education - A Contributor to Trade and Industrial Education

Industrial arts education is not considered a part of vocational-technical education by most authorities in the field, but it has a significant prevocational relationship with vocational-technical education.

Industrial arts education has many purposes, but its major objective is general education for those enrolled. Among its many purposes is the offering of exploratory courses. Exploration of occupational fields is very important to trade and industrial education. All students enrolling in vocational courses in the trade and industrial field should have had some exploratory experiences in one or more industrial arts classes. It is probably safe to say that all junior and senior high schools in Montana are conducting some form of industrial arts class. This all-important program receives very limited supervisory service from the State Supervisor of Trade and Industrial Education. This Supervisor's main responsibility is with the vocational program, and time does not permit him to devote much attention to industrial arts. The Department of Public Instruction would render valuable service to industrial arts education in the public schools of Montana through the employment of an individual to supervise this program. This individual should be well grounded in the theory, practices, and philosophy of industrial arts. Since this program has a close relationship to trade and industrial education, the work of the proposed supervisor should be closely coordinated with that of the State Supervisor of Trade and Industrial Education.

Criteria for Evaluating a Program of Trade and Industrial Education

The evaluative criteria presented in this section are appropriate to programs of trade and industrial education in any locality. These criteria have been drawn from several sources, among them, Sections D-10 and D-19 of the *Evaluative Criteria, Vocational Trade and Industrial Education, National Study of Secondary School Evaluation*, formerly *Cooperative Study of Secondary School Standards*. Some came from a publication of the American Technical Society, *A Procedure for Evaluating a Local Program of Trade and Industrial Education*, and yet others came from the work of a joint committee appointed by the Board of Directors of the American Vocational Association and reported in the October, 1967 issue of the *American Vocational Journal*.[2] Some state publications were also used; and, in addition, the experience of the Survey Staff contributed to the list of evaluative criteria.

Since the groups and individuals who developed these criteria are recognized leaders in trade and industrial education throughout the United States, it is safe to assume that the criteria are adequate for use in judging a program of trade and industrial education.

A. The State Level

1. An organizational structure exists with lines of authority and responsibility clearly defined and with duties and responsibilities of each position on the state staff properly delineated.

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[2] "Industrial Arts and Trade and Industrial Education," *American Vocational Journal*, October, 1967, pp. 76-77.

2. The state staff consists of persons well qualified by reasons of experience, professional training, and personal qualities.
3. The professional relationships of the staff to the state director of vocational education and other services of the state department of education are recognized and observed.
4. The state staff makes periodic visits to all school districts having programs of trade and industrial education to consult with administrators and to observe classes in operation.
5. Industrial contacts are kept active by the state staff's actual participation in meetings with labor and management.
6. Staff members are available to school districts to provide professional assistance in program planning and development.
7. The state staff maintains adequate records of the present status of the program.
8. The state staff takes an active part in developing student industrial clubs[3] in the local school districts.
9. Statistical and descriptive reports are issued annually showing the complete history, progress, and record of the program for the year.
10. Records and reports are available which project the program into the immediate future to show program growth, needs, and financial requirements.
11. Research and study of an evaluative nature are carried on continuously, and reports of such work are made available for review and further study by others.
12. The state has a functional plan for training teachers which is conducted by a well-qualified staff.
13. Provision is made for full-time and part-time teachers to receive preservice and inservice teacher training.
14. The teacher trainer and his staff provide consultative services for teachers concerning professional growth and assist teachers with instructional problems.
15. The teacher trainer visits regularly all teachers in training and all schools offering instruction in trade and industrial education.

B. The Local Level

1. The school administrator and other school personnel show an interest in vocational trade and industrial education and have an understanding of its objectives.
2. The program is under the general direction of a qualified director or supervisor.

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[3] For example, Vocational Industrial Clubs of America (VICA).

3. The program objectives, duties, responsibilities, and cooperative relationships are clearly defined.
4. An employer-employee advisory committee helps plan the program.
5. The curriculum is developed, reviewed, and updated with the assistance of management and labor from the craft advisory committees.
6. The time devoted to on-the-job training is at least 15 hours weekly.
7. The time schedule, level, and amount of instruction must be adequate to develop necessary skills and related technical understanding essential for successful entry into, and progress in, a trade, service, industrial, or technical occupation.
8. Adequate provision is made for supervision of instruction, curriculum and course planning, and inservice programs for teacher education.
9. The local director makes periodic evaluations of the program.
10. The trade and industrial education program is recognized as one part of the total program of education in the school district.
11. A definite procedure exists for determining the needs for trade and industrial training, and both full- and part-time courses are organized upon the basis of the needs which have been demonstrated.
12. The program serves in-school youth and out-of-school youth and adults.
13. The buildings are structurally suitable, clean, well located, and adequate for training needs.
14. All instructional activities are conducted with due regard for the health and safety of students.
15. Instructional areas are utilized appropriately, with adequate provision for safe operation of equipment.
16. There are general provisions for safety and first aid.
17. Adequate storage space is available for supplies and other instructional items.
18. Instructors are adequately qualified by reason of actual work experience and formal education.
19. Instructors are professionally minded in that they have planned programs of professional growth, including certification requirements and beyond.
20. Instructors are alert to occupational status, changes, and needs of their industrial areas.
21. Instruction follows a planned program, and the skills taught and the related instruction given are adapted to occupational needs.
22. Individual differences are recognized, and provision is made for individual instruction.

23. Adequate records of student progress are maintained.

24. An adequate shop library is available.

25. Students are admitted to classes upon the basis of counseling and guidance screening, including an appropriate battery of tests.

26. Standards of performance and discipline are made known to students.

27. Written tests are used to measure competency in related subjects, and special performance tests are used to evaluate skill level.

28. Follow-up records and data are kept concerning student performance on the job.

29. There are available instructional materials, such as models, mock-up drawings, films, slides, and other audio-visual materials, instruction sheets, plans, and blueprints.

30. The instructional program is reviewed by advisory committees.

Procedures Used in the Survey

The survey of trade and industrial education in Montana was conducted by means of interviews and conferences, questionnaires, school visitation and observation, analysis of records and reports, and other similar procedures.

Individual interviews were held with representatives of the State Department of Public Instruction, school administrators, instructors, and representatives of labor and management. From these meetings the Survey Staff gained an understanding of the points of view held by individuals and groups concerning the present status and possible developments of trade and industrial education in Montana. Information obtained through these procedures is presented in appropriate places throughout this chapter.

Questionnaires relating to trade and industrial education were sent to the 59 full-time teachers of trade and industrial classes and to the seven practical nurse instructors in Montana.

The writer visited all instructors of trade and industrial subjects and practical nurse instructors in nine Montana high schools, the area vocational schools at Helena and Missoula, the community colleges at Kalispell and Miles City, and Northern Montana College.

These schools represent a cross section, large and small, of schools in Montana which have vocational courses in trade and industrial education. They represent also different geographical areas and are well distributed over the State. This type of sampling permitted the writer to gain opinions and suggestions from most parts of the State as well as to have an opportunity to talk with each trade and industrial teacher in the schools contacted and to visit each of their shops and laboratories.

In addition to meeting with the trade and industrial instructors in each of the schools visited, the writer called on the district superintendent and school principal.

In order to obtain comparative opinions on different aspects of trade and industrial education, all teachers contacted personally were asked the same set of questions. A similar procedure was followed in interviewing representatives of labor and management. This series of interview questions was prepared in advance by the Survey Staff and was closely followed during the interviews, thus securing from many different individuals responses to the same questions.

The annual descriptive and statistical reports prepared by the State vocational staff were reviewed by the writer as were the annual reports issued by the United States Office of Education. The State Supervisor of Trade and Industrial Education made available to the writer various statistical and descriptive materials which greatly assisted in the compilation of data. Such cooperation is greatly appreciated.

Historical Background of Trade and Industrial Education in Montana

After the passage of the Smith-Hughes Act in 1917, which provided funds to the states for the development and promotion of vocational education, it took some time for Montana to set up its program in trade and industrial education. The writer was unable to discover an early history of vocational education in Montana, but some interesting facts about the early beginnings of trade and industrial education in the State were located.

Montana was considered an agriculture state and in the early years of the Smith-Hughes Act received minimum Federal fund allotments of approximately $18,000 for agricultural education, $10,000 for trades and industries and home economics, and $10,000 for teacher training in agriculture, trades and industries, and home economics. Since Montana received only the minimum allotment, the establishment of trade and industrial programs was painfully slow. During the 1923-24 school year, Gallatin County High School began an auto mechanics program. There were few other programs in the State at that time. During these early years of vocational education in Montana, the headquarters of the State Staff was at Montana State College at Bozeman.

The trade and industrial education program developed slowly during the thirties, with only a few high schools participating. At this time about six schools had developed day trade programs, but quite a few had developed diversified part-time cooperative programs with enrollments about double the day trade program. In 1939, under new leadership from the State office, the day trade program began to expand. This was the beginning of World War II years in Europe.

By June of 1941 some of the day trade program facilities were used a full 24 hours a day for training war production workers. The present State Supervisor of Trade and Industrial Education came to the Montana vocational staff at this time under the title of Assistant State Supervisor of Trade and Industrial Education in charge of War Production Workers. There were many more day trade classes during the war years and fewer part-time cooperative classes. By the fall of 1948 the Fireman Training program was started.

During 1949 the vocational staff was moved from Montana State College to the Capitol area in Helena. By this time the George-Barden Act had been passed, giving additional Federal funds for the support of vocational education.

Montana, being a less populous state and classified as a state receiving the minimum allotment of Federal funds, received $40,000 for trade and industrial education. Workers returning after World War II increased the need for supplementary training, and accordingly these Federal funds helped but were not sufficient to meet all the training needs.

With the passage of the George-Barden Act Amendments, which made provision for training in health occupations, the State Supervisor of Trade and Industrial Education became also the Supervisor of Health Occupations.

The December, 1952 issue of the American Vocational Journal describes the several fields of vocational education in Montana. The description of trade and industrial education is as follows:

> Trade and industrial education departments of 16 high schools in Montana are providing valuable student-learner experiences for those who will enter industrial employment. Many students receive some credit on their apprenticeship after graduation from high school and entrance into employment.
>
> Some high schools provide extension training for adults already employed in industry. Efforts are being made to provide related instruction for the apprentice in these adult classes. However, many apprentices are unable to secure related instruction in organized vocational classes due to lack of school funds and facilities.
>
> Montana needs skilled workers to keep pace with growing industries. People often think of Montana as a mining state. They naturally assume industrial employment is chiefly in mining and smelting. This is not a true picture.
>
> In addition to mining and smelting, Montana has public utilities, manufacturing, construction, and oil and transportation industries that require large numbers of skilled workers.... School administrators and local boards are beginning to recognize more and more the importance of trade and industrial education in the total secondary school program as manifested by the facilities provided. Nine high schools have built shops and classroom facilities specifically designed for trade and industrial classes. The time when just any old obsolete building was good enough for a shop is past....[4]

The above excerpt clearly expresses the need for and interest in trade and industrial education in Montana. This article points also to the lack of funds for the promotion and development of trade training classes and to the need for new shops and laboratories.

As indicated earlier practical nurse education is considered one aspect of trade and industrial education. As early as 1953, vocational funds for trade and industrial education were used to reimburse school districts for practical nurse education. Northern Montana College is listed as one of the early programs; other programs followed at different times in Great Falls, Bozeman, Missoula, Butte, Kalispell, and Shelby.

The trade and industrial education programs in Montana as of 1967-68 were not only located in the larger industrial centers but were fairly well distributed over the State. During 1967-68 there were 25 schools offering trade preparatory courses in 17 of the major trades. Figure 7 shows the locations of the 25 day programs of trade and industrial education. Included are the programs at Flathead Valley Community College and Northern Montana College. The majority of these programs are located in the western half of the State where the greater population and the greater number of industries are located. Eighteen of Montana's 56 counties have trade and industrial programs.

Montana, like other states, attempts to provide trade extension or supplementary classes in trade and industrial education at centers having day trade and industrial programs.

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[4] Kenneth A. Rawson, "The Journal Salutes Montana," American Vocational Journal, December, 1952, pp. 4-8.

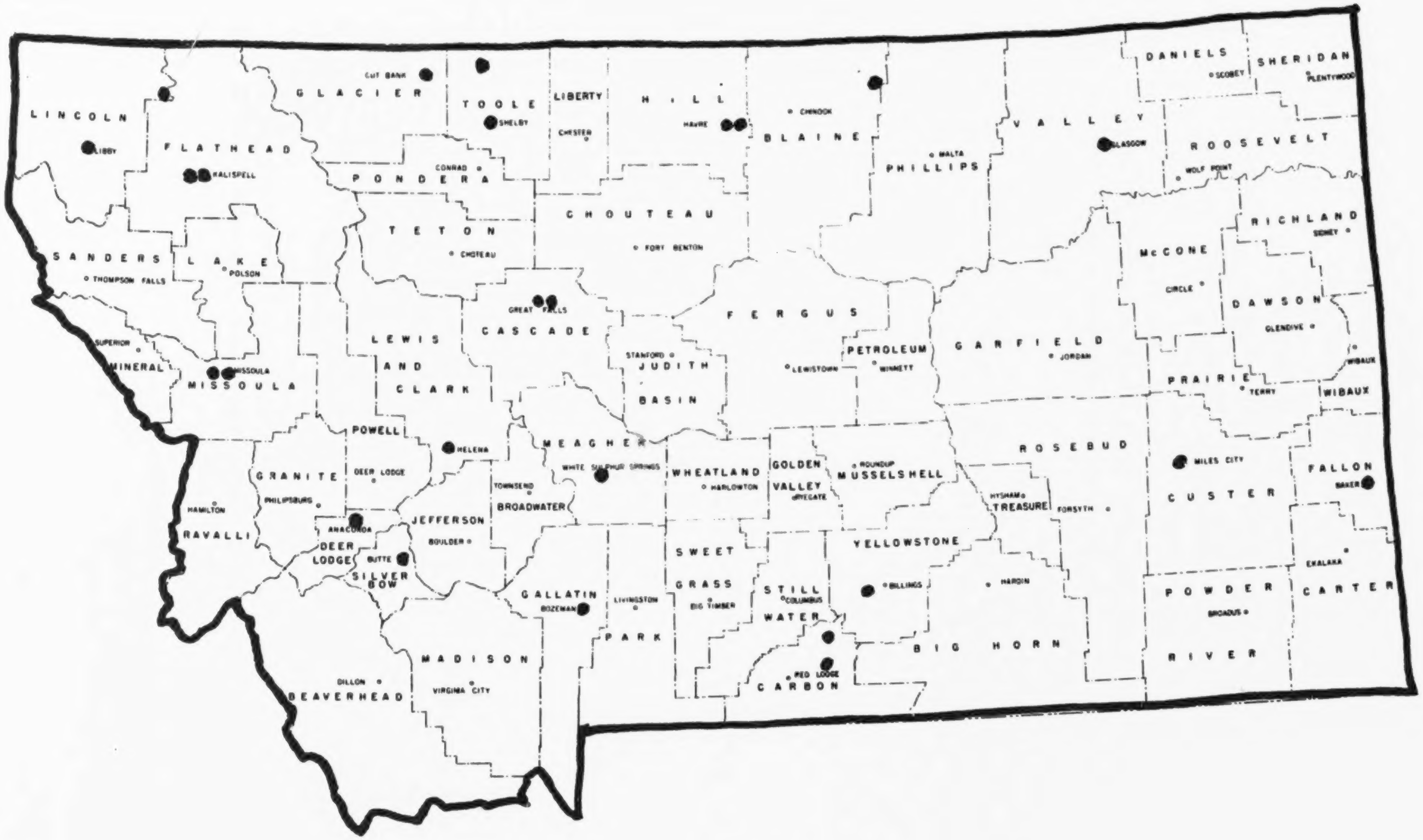
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
MINERAL
SUPERIOR
MISSOULA
LEWIS AND CLARK
HELENA
CASCADE
GREAT FALLS
JUDITH BASIN
STANFORD
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
GARFIELD
JORDAN
McCONE
CIRCLE
RICHLAND
SIDNEY
DAWSON
GLENDIVE
PRAIRIE
TERRY
WIBAUX
POWELL
DEER LODGE
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
ANACONDA
DEER LODGE
BUTTE
SILVER BOW
JEFFERSON
BOULDER
BROADWATER
TOWNSEND
MEAGHER
WHITE SULPHUR SPRINGS
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
ROSEBUD
FORSYTH
TREASURE
HYSHAM
CUSTER
MILES CITY
FALLON
BAKER
CARTER
EKALAKA
POWDER RIVER
BROADUS
BIG HORN
HARDIN
YELLOWSTONE
BILLINGS
SWEET GRASS
BIG TIMBER
STILLWATER
COLUMBUS
CARBON
RED LODGE
PARK
LIVINGSTON
GALLATIN
BOZEMAN
MADISON
VIRGINIA CITY
BEAVERHEAD
DILLON

Figure 7. Locations, by counties, of the day trade and industrial education programs in Montana schools, 1967-68

(Source: Montana's State Supervisor of Trade and Industrial Education)

Programs in education for practical nursing in 1967-68 were located at Bozeman, Great Falls, Missoula, and Havre (Northern Montana College). The total staff was seven instructors. The locations of the four cities having health occupations programs in 1967-68 are shown in Figure 8. They are all in the western half of the State.

Helena Vocational-Technical School and Missoula Technical Center had been designated by the State Board for Vocational Education as area vocational schools.

A General View of Trade and Industrial Education at the State Level

The vocational program in Montana is operating under a revised State Plan approved by the State Board for Vocational Education on January 12, 1965 and by the United States Commissioner of Education on September 22, 1965. The Vocational Act for 1963 provides funds for an increasing range of vocational instruction; consequently the State Plan makes provision for a more expanded and diversified program than was conducted in previous years.

It is interesting to note that the State Plan contains a cooperative agreement between the Unemployment Compensation Commission of Montana and the Montana Department of Public Instruction. The major purposes of the agreement are to establish good working relationships, free flow of information, and understanding of responsibilities of each agency and to provide for review of working relations. This agreement, among other things, specifically indicates in a few short statements the responsibility of the Department of Public Instruction for vocational education. The statement reads as follows:

> The Department of Public Instruction, through local educational agencies where such programs are established, will aid and endeavor:
>
> a. To provide vocational education for persons attending high school.
>
> b. To provide vocational education for persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market.
>
> c. To provide vocational education for persons who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment.
>
> d. To provide vocational education for persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational program.
>
> e. To provide counseling and testing services for those students enrolled in school and school programs.[5]

The above responsibilities apply to all the vocational education services in the Montana State Department of Public Instruction. The Trade and Industrial Service of the Department has these same responsibilities. In the Trade and Industrial Education section of the Plan it is stated that the specific objectives of instruction of this section are as follows: "Vocational education in trades and industries, under the State Plan, shall be designed for persons over 14 years of age, who have entered upon, or are preparing to enter upon, the work of a trade or industrial occupation."[6]

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[5] Montana Department of Public Instruction, Plan for Vocational Education Under the Vocational Education Act of 1963, Appendix II, p. 1.

[6] Ibid., p. 37.

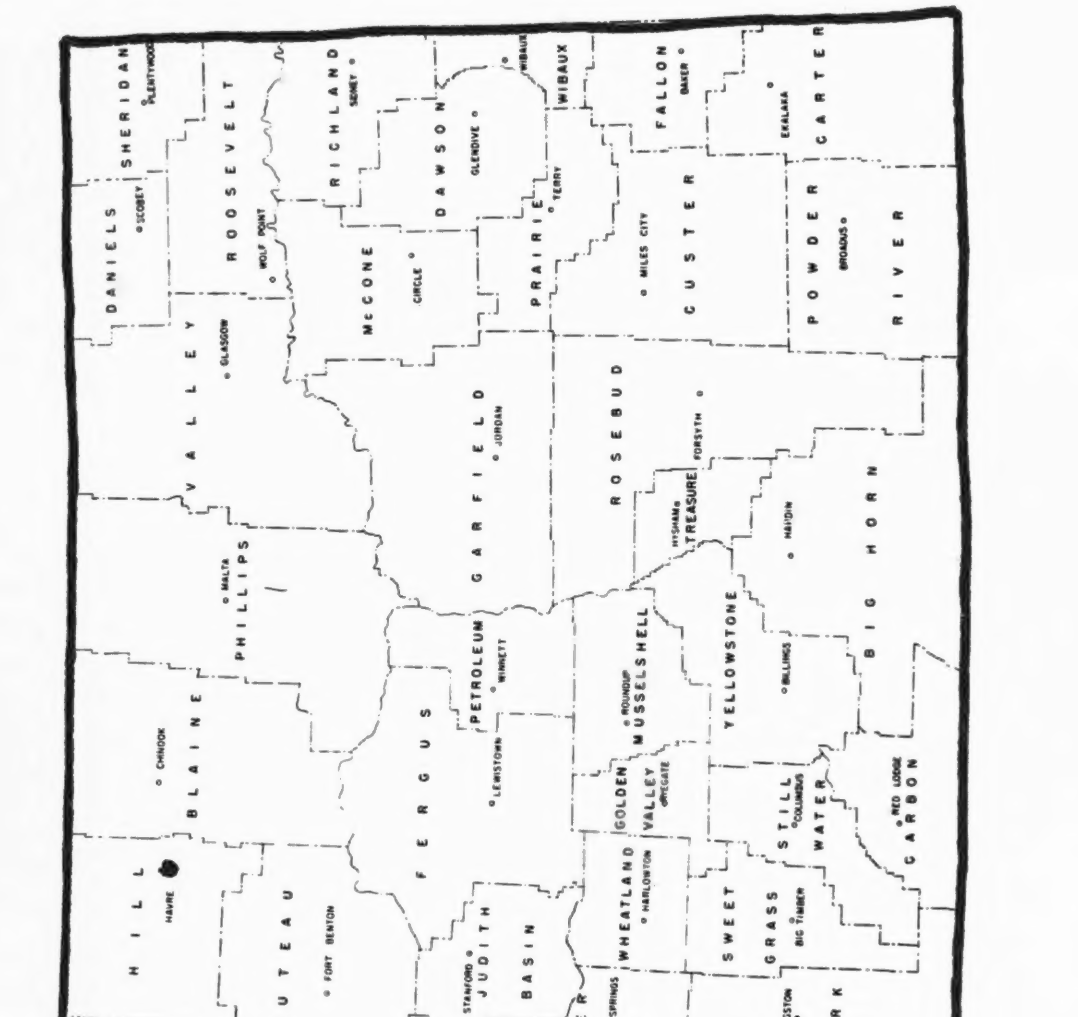
LINCOLN
LIBBY
FLATHEAD
KALISPELL
SANDERS
THOMPSON FALLS
LAKE
POLSON
MINERAL
SUPERIOR
MISSOULA
MISSOULA
RAVALLI
HAMILTON
GLACIER
CUT BANK
PONDERA
CONRAD
TETON
CHOTEAU
LEWIS AND CLARK
HELENA
POWELL
DEER LODGE
GRANITE
PHILIPSBURG
DEER LODGE
ANACONDA
SILVER BOW
BUTTE
BEAVERHEAD
DILLON
TOOLE
SHELBY
LIBERTY
CHESTER
CASCADE
GREAT FALLS
JEFFERSON
BOULDER
BROADWATER
TOWNSEND
MADISON
VIRGINIA CITY
GALLATIN
BOZEMAN
HILL
HAVRE
CHOUTEAU
FORT BENTON
MEAGHER
WHITE SULPHUR SPRINGS
JUDITH BASIN
STANFORD
WHEATLAND
HARLOWTON
SWEET GRASS
BIG TIMBER
PARK
LIVINGSTON
BLAINE
CHINOOK
FERGUS
LEWISTOWN
GOLDEN VALLEY
RYEGATE
STILLWATER
COLUMBUS
CARBON
RED LODGE
PHILLIPS
MALTA
PETROLEUM
WINNETT
MUSSELSHELL
ROUNDUP
YELLOWSTONE
BILLINGS
BIG HORN
HARDIN
VALLEY
GLASGOW
GARFIELD
JORDAN
ROSEBUD
FORSYTH
TREASURE
HYSHAM
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
McCONE
CIRCLE
RICHLAND
SIDNEY
DAWSON
GLENDIVE
PRAIRIE
TERRY
WIBAUX
WIBAUX
CUSTER
MILES CITY
FALLON
BAKER
POWDER RIVER
BROADUS
CARTER
EKALAKA

Figure 8. Locations, by counties, of the education programs for practical nursing and other health occupations in Montana, 1967-68

(Source: Montana's State Supervisor of Health Occupations)

The Plan further states that:

> (1) Trade and industrial education means education which includes any subject which is necessary to develop the manipulative skills, technical knowledge, and related information, such as job attitudes, safety practices, and trade judgment necessary to employment in a trade and industrial occupation.
>
> (2) Such an occupation shall include:
>
> (a) any craft, skilled trade, or semiskilled occupation which directly functions in the designing, producing, processing, fabricating, assembling, testing, modifying, maintaining, servicing, or repairing of any product or commodity.
>
> (b) any other occupation, including a service occupation, which is not covered in paragraph (a), but which is usually considered to be technical, or trade and industrial in nature.[7]

As previously indicated in this chapter, the State Supervisor of Trade and Industrial Education is also responsible for supervising vocational education in health occupations. In describing the objectives of instruction in health occupations and the occupations to be served the State Plan states:

> 8.61 Objective of Instruction
>
> Vocational education in health occupations under this plan, pursuant to Title II of the George-Barden Act, shall be designed for persons who are preparing to enter one of the health occupations and for persons who are or have been employed in such occupations in hospitals or other health agencies. For the purposes of this section "other health agencies" means institutions or establishments other than hospitals which provide patients with medical or nursing service under the direction of a doctor or registered professional nurse.
>
> 8.62 Occupations to be served
>
> Health occupations to be served are understood to mean occupations which render supportive service to the health professions such as nursing, medical and dental practice, all of which are concerned with providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to people. As used in this program such occupations:
>
> (1) Include practical or vocational nursing.
>
> (2) Include those occupations that require basic understandings and skill required in giving nursing care or other health services to people.
>
> (3) Exclude occupations recognized as occupations in other than the health field. In applying this condition, the scope and nature of the duties, rather than title of the occupation, govern.[8]

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[7] Ibid., pp. 37-38.

[8] Ibid., p. 42.

Activities of the State Staff

The above excerpts from the Montana State Plan for Vocational Education briefly describe the specific area of responsibility of the State Supervisor of Trade and Industrial Education as the responsibility pertains to health occupations. While public service training is not pointed out as a distinct occupational area in the trade and industrial field, it is one of the major areas of concern. Particular emphasis is placed on fireman training to the extent that a traveling instructor is employed to give full attention to this field, and during previous years two instructors were employed for this purpose.

The State staff in Trade and Industrial Education consists of a head State Supervisor and one traveling instructor of fire training. The State Supervisor, in addition to supervising the trade and industrial program and health occupations, is responsible for offering trade and industrial teacher training.

The writer was unable to find a list of written duties and responsibilities for the Supervisor's position other than a brief paragraph in the State Plan which reads as follows:

> Head State Supervisors and Assistant Supervisors shall be responsible for the general supervision of their areas of assignment. There shall be such administrative responsibility as may be assigned by the Executive Officer or State Director. These duties may include such things as attending conferences, coordinating programs, reparing reports, and such other duties as may be necessary or assigned.[9]

While the above description of duties and responsibilities for State supervisory staff members is adequate as a general statement to be included in the State Plan, it is not considered by the Survey Staff to be adequate direction for program operation. It is customary and quite imperative for organizations to develop and make available to their employees job specifications which will include requirements for entry into employment as well as the duties and responsibilities of the job which must be adhered to by the employee. Such delineation of duties and responsibilities eliminates confusion and misunderstanding as to the specific duties to be performed and the ones to be shared with others. It also minimizes the possibility of an employee's spending time in areas where he does not have a responsibility. Perhaps the greatest advantage of such job descriptions is that they provide a basis for evaluating performance in a position. There is a definite need for job specifications to be prepared for the trade and industrial education staff.

The trade and industrial programs are scattered over the State, thus requiring much travel time for State staff. Teacher training responsibilities are quite time consuming, and the health occupations program not only needs supervisory visitation but requires the State Supervisor to keep in close touch with many different health groups. The Montana State Apprenticeship Law designates the State Supervisor of Trade and Industrial Education as an ex-officio member of the Montana Apprenticeship Council. Membership in this Council requires a considerable amount of the time of the State Supervisor in meeting with this group and performing duties related to the apprenticeship program. It is apparent from this work load that the State staff should be increased by one person in the immediate future.

The State Supervisor of Trade and Industrial Education and the Instructor of Fireman Training are housed along with several other Department of Public Instruction employees in quarters approximately two miles from the State Capitol area, where the majority of the vocational (and other education) personnel are housed. The office space is adequate, but coordination of staff activities becomes difficult when the staff is not housed as a unit.

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[9] Ibid., p. 7.

As indicated earlier in this chapter, the State Supervisor of Trade and Industrial Education serves in a relatively large number of additional professional capacities in Montana. As supervisor of the trade training classes, he provides numerous general and specialized services for local school districts. Such services include the determination of needed courses, planning and improving programs, developing standards of instruction, and planning miscellaneous consultative and evaluative services.

Thirty-seven teachers out of a total of 66 day-school teachers, teaching trade and industrial and practical nursing classes, were interviewed by the writer. All teachers stated that they received regular yearly visits from the State Supervisor. With the exception of a very few, they indicated that his calls were of considerable assistance.

The State Supervisor's teacher training activities consist of such training sessions as a two-day workshop for industrial technical teachers at the annual Montana Vocational Education Conference. He also conducts fire service instructor courses for officers of fire departments. Inservice teacher training is given through class visitation and helping teachers on the job. He also conducts supervisory courses for management and other professional groups.

In addition to his work with public schools, fire departments, and health departments, the Supervisor represents the Department of Public Instruction and the public schools when he serves as a member of the Montana Apprenticeship Council. The development and preparation of a strong program in trades and industries requires close association with industrial groups and organizations. In order to keep the trade and industrial program abreast of changing conditions, the State Supervisor works with such groups as the Montana Employment Service; the Bureau of Apprenticeship and Training, U.S. Department of Labor; the Montana State Apprenticeship Council; the Montana State Fire Chiefs' Association; the Montana Fireman's Association, the State Fire Marshall's office; and labor and management groups.

In connection with his responsibilities as Supervisor of Health Occupations, the State Supervisor works with the National League of Nursing, the Montana League of Nursing, the Montana Health Planning Council, the Montana State Board of Nurse Examiners, the Montana Nurses' Association, the Montana Practical Nurses' Association, and the Montana Hospital Association.

In addition to the above mentioned groups the State Supervisor meets actively with the student membership of the Montana Association of Vocational Industrial Clubs of America (VICA). Vocational Industrial Clubs were recently organized in many states of our nation. In 1966-67 there were seven such clubs in Montana with a total membership of 181.

Enrollments in Trade and Industrial Education

In Table 88 are shown enrollment data for trade and industrial education in Montana for the most recent 10-year period for which data were available. These enrollments include students in both the day and evening programs. The three most recent years in the period show consistent enrollment growth. Enrollments for the seven preceding years in Table 88 reveal a rather unstable pattern with four years showing decreases and the others, increases. Tentative figures for 1966-67 indicate a decrease (2,224).

In Table 89 the trade and industrial education enrollments in Montana are compared with those for the 10 other Western states for a recent period of years. Many of the states reflect the same pattern of marked ups and downs as was evident for Montana in Table 88. Indexes for the most recent year of the period shown in the table indicate that Montana is at the median of the group as regards enrollment changes compared with the base year (1955-56). For each of the other years for which indexes are shown, Montana falls just below the median position.

TABLE 88

MONTANA ENROLLMENTS IN TRADE AND INDUSTRIAL EDUCATION, 1956-57 THROUGH 1965-66

School year	Number	Index*
1956-57	2,281	100
1957-58	2,260	99
1958-59	2,713	119
1959-60	2,356	103
1960-61	2,326	102
1961-62	2,366	104
1962-63	2,037	89
1963-64	2,784	122
1964-65	2,803	123
1965-66	3,870	170

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964); Office of Montana's Director of Vocational Education (Fiscal years 1965 and 1966).

*1956-57 used as the base year (index = 100).

Enrollments in practical nursing courses and courses for other types of health occupations are, of course, rather small since the program is relatively new in the field of vocational-technical education. In Table 90 are shown for Montana the enrollments in the programs for the health occupations for the most recent 10-year period for which data were available. The indexes of enrollment tend to be large, reflecting the low enrollment (46) of the base year used (1957-58). For six of the years there were enrollment increases. The peak year was 1963-64, with an enrollment of 231. Tentative figures for 1966-67 show an enrollment of 216, which would again represent an increase over the preceding year. In the 1967-68 school year there are programs of health occupations education in only four Montana cities, with a total of only seven instructors.

This program needs help both locally and at the State level. The five health occupations teachers who answered their survey questionnaire reported that they have received some inservice help from both conferences and workshops, but little help from either local administrators or State personnel.

Table 91 provides comparative data for Montana and the 10 other Western states as regards enrollments in courses for health occupations for four alternate years. The indexes show great variations for most of the states, due undoubtedly to the fact that this type of program is relatively new in the family of vocational-technical programs. Comparatively Montana has done quite well among this group of states with respect to enrollment growth. For example, in 1963-64 Montana's index ranked second among the indexes for the group. The indexes, of course, reflect the enrollment level of the base year. For certain states this could produce a seemingly abnormal picture. The reader can, by multiplication, determine the approximate yearly enrollments for any state for additional comparative purposes.

TABLE 89

ENROLLMENTS IN TRADE AND INDUSTRIAL EDUCATION IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT ENROLLMENTS, BY ALTERNATE YEARS, 1957-58 THROUGH 1963-64

State	Enrollment 1955-56	Index* of enrollment			
		1957-58	1959-60	1961-62	1963-64
Arizona	6,977	113	119	144	114
California	109,244	111	116	120	126
Colorado	23,454	103	87	88	77
Idaho	2,930	86	110	89	91
MONTANA	2,402	94	98	99	116
Nevada	1,566	149	147	117	125
New Mexico	1,923	110	152	133	151
Oregon	10,963	58	76	87	79
Utah	8,704	78	64	87	75
Washington	34,082	153	115	133	121
Wyoming	1,148	128	97	128	178
U.S. (total)	883,719	111	106	114	121

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* 1955-56 is used as the base year (index = 100).

Expenditures for Trade and Industrial Education

Expenditures for the Montana program of trade and industrial education for a recent 10-year period are shown in Table 92. These expenditures do not include those for health occupations; these will be shown later as separate expenditures.

The pattern of increase for these expenditures is almost constant for the period, for in only one year (1962-63) was there a decrease in the amount. For the period (1963-64 compared with 1954-55) there has been a 36 per cent increase in expenditures. More recent reports from the U.S. Office of Education, when published, will undoubtedly show increases for these expenditures, especially those for 1965-66.

In Table 93 are included comparative data for the 11 Western states in regard to expenditures for trade and industrial education for a recent period of years. The rather consistent pattern of increasing expenditures evident in Table 92 for Montana is repeated in Table 93 and is evident also for most of the Western states. In 1963-64, Montana's index places the State in seventh rank among the 11 states. For each of the years for which indexes are shown, Montana is slightly below the median.

TABLE 90

MONTANA ENROLLMENTS IN EDUCATION FOR HEALTH OCCUPATIONS, 1956-57 THROUGH 1965-66

School year	Number	Index*
1956-57	--	--
1957-58	46	100
1958-59	123	267
1959-60	86	187
1960-61	76	165
1961-62	126	274
1962-63	166	361
1963-64	231	502
1964-65	132	287
1965-66	161	350

Source: U.S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1957 through 1962) and *A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education* (Fiscal years 1963 and 1964); Office of Montana's Director of Vocational Education (Fiscal years 1965 and 1966).

* 1957-58 used as the base year (index = 100).

Montana's expenditures for education in the health occupations for a recent 10-year period are shown in Table 94. With the exception of 1962-63, there has been a pattern of increasing costs. The peak year was 1961-62. Unpublished data indicate a continuing pattern of increases in more recent years, with a very large increase for 1965-66.

In Table 95 are shown for the 11 Western states comparative expenditures for education for health occupations for a recent period of years. As pointed out earlier, this type of education is relatively new in the vocational-technical galaxy; therefore, there is a tendency for data not to follow a highly consistent pattern. That this is true is evident in Table 95 in which the indexes show great variations not only for a given state but also among the states. For 1959-60 and 1961-62 Montana is third rank among the states as regards the index levels. In 1963-64, however, she slips to seventh spot among the 11 states as regards the index level.

Relationships with Other Phases of Montana Education and Government at the State Level

The *State Plan for Vocational Education* provides for the establishment of a Vocational Advisory Council which consults with the State Board through the State Staff, in carrying out the *State Plan*. The *State Plan* states that the composition of the Council will include representation from management and labor. The following quotation is taken from the *Plan*: "At least one member familiar with the vocational education needs of management in the State, at least one member familiar with the vocational education needs of labor, and at least one member representative of junior colleges, technical institutes, or other institutions of higher education which provide programs of vocational or technical training."[10]

---

[10] Montana Department of Public Instruction, *Montana State Plan for Vocational Education*, p. 1.

TABLE 91

ENROLLMENTS IN EDUCATION FOR HEALTH OCCUPATIONS IN THE 11 WESTERN STATES FOR 1957-58 AND INDEXES OF SUBSEQUENT ENROLLMENT, BY ALTERNATE YEARS, 1959-60 THROUGH 1963-64

State	Enrollment 1957-58[a]	Index* of enrollment		
		1959-60[a]	1961-62[a]	1963-64[b]
Arizona	166	128	134	128
California	1,975	135	279	498
Colorado	994	122	45	49
Idaho	388	125	130	124
MONTANA	46	187	274	502
Nevada	109	148	281	193
New Mexico	184	54	61	55
Oregon	264	179	225	281
Utah	26	950	892	1,435
Washington	321	377	678	714
Wyoming	--	100	133	200
U.S. (total)	27,423	147	179	215

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1958 through 1962) and A Review of Activities of Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* 1957-58 is used as the base year (index = 100) except for Wyoming (1959-60 used as the base year).

[a] Designated as "practical nursing under Title II of the George-Barden Act."

[b] Designated as "health occupations under Title II of the George-Barden Act."

In developing the State Plan, the State staff has realized the importance of collaborating with industrial groups on the State level and has made provision for such relationships. As already pointed out, the State Plan describes a cooperative agreement between the Unemployment Compensation Commission of Montana and the Montana Department of Public Instruction. This arrangement has for one of its major objectives the establishment of good working relationships between the two public agencies.

The above working relationships with the Advisory Council and the Unemployment Compensation Commission of Montana are of particular importance to the trade and industrial education service because of the large number of industrial workers trained, each of whom is directly affected by labor and management groups as well as by the State Employment Service.

TABLE 92

EXPENDITURES* FOR TRADE AND INDUSTRIAL EDUCATION IN MONTANA, 1954-55 THROUGH 1963-64

School year	Amount	Index**
1954-55	$131,750	100
1955-56	141,813	108
1956-57	149,030	113
1957-58	152,622	116
1958-59	159,061	121
1959-60	159,261	121
1960-61	164,249	125
1961-62	169,779	129
1962-63	169,123	128
1963-64	179,161	136

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1955 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1954-55 is used as the base year (index = 100).

Evaluation of the Work of the State Staff

Earlier in this chapter were presented 15 criteria for evaluating the work of a state staff in trade and industrial education. In this section each criterion is repeated and then a brief evaluative application is made of it to the Montana situation.

1. An organizational structure exists, with lines of authority and responsibility clearly defined and with duties and responsibilities of each position on the state staff properly delineated.

The Montana State Plan and other documents show clearly the lines of authority for all members of the State staff. To amplify the brief description of duties and responsibilities of the trade and industrial education staff listed in the State Plan, there are no clearly defined statements of duties and responsibilities prepared for this staff. These are needed in the form of job descriptions or specifications.

2. The State staff consists of persons well qualified by reason of experience, professional training, and personal qualities.

The members of the State staff of Montana are professionally competent and, for the most part, are highly regarded by their professional associates. They are also dedicated to the strengthening and improvement of trade and industrial education.

TABLE 93

EXPENDITURES[*] FOR TRADE AND INDUSTRIAL EDUCATION IN THE 11 WESTERN STATES FOR 1955-56 AND INDEXES OF SUBSEQUENT EXPENDITURES, BY ALTERNATE YEARS, 1957-58 THROUGH 1963-64

State	Expenditures 1955-56	Index[**] of expenditures			
		1957-58	1959-60	1961-62	1963-64
Arizona	$ 369,070	102	104	114	125
California	5,275,403	118	127	140	176
Colorado	522,215	113	116	123	139
Idaho	252,607	115	102	101	122
MONTANA	141,813	108	112	120	126
Nevada	79,922	121	157	187	228
New Mexico	166,146	99	104	117	128
Oregon	677,730	59	58	60	72
Utah	466,289	125	120	135	146
Washington	1,379,836	134	141	150	164
Wyoming	118,985	114	95	102	88
U.S.(total)	$59,039,838	117	122	143	173

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1956 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

[*] Expenditures for vocational guidance are not included.

[**] 1955-56 is used as the base year (index = 100).

3. The professional relationships of the staff of the state director of vocational education and other services of the state department of education are recognized and observed.

The Survey Staff found that there were generally good relationships in Montana among the State education staff members. Perhaps the only derogatory comment to be made is that the geographical location of the housing of the trade and industrial education staff makes coordination of responsibilities more difficult.

4. The state staff makes periodic visits to all school districts having programs of trade and industrial education to consult with administrators and to observe classes in operation.

As reported earlier in this chapter, the writer visited slightly more than one-half of the trade and industrial teachers teaching day classes in Montana. Each of these teachers indicated that the State Supervisor called on him as often as could be expected in terms of his load. As proposed elsewhere in this report, an additional staff member is needed to serve more adequately the industrial education program of the State.

TABLE 94

EXPENDITURES* FOR EDUCATION IN HEALTH OCCUPATIONS IN MONTANA, 1956-57 THROUGH 1963-64

School year	Amount	Index**
1956-57	$ 8,678	100
1957-58	8,884	102
1958-59	14,488	167
1959-60	21,405	247
1960-61	26,537	306
1961-62	37,046	427
1962-63	25,105	289
1963-64	27,599	318

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1957 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1956-57 is used as a base year (index = 100).

5. Industrial contacts are kept active by the state staff's actual participation in meetings with labor and management.

From the limited time for observation, the writer determined that the State staff keeps industrial contacts alive. The State Supervisor's participation as a member of the Montana Apprenticeship Council and the many State associations with which he works indicate that his participation in this area is as extensive as time will permit. The only observation which seems to be called for is that this kind of essential association is not carried on to any great extent in most local school districts visited by the Survey Staff.

6. Staff members are available to school districts to provide professional assistance in program planning and improvement.

Through a review of several of the annual descriptive reports made by the State Supervisor in recent years and through discussions with school principals visited, the writer is of the opinion that the State Supervisor assists school districts in program planning as often as his limited time for this purpose will permit.

7. The state staff maintains adequate records of the present status of the program.

Reports and records available in Montana are primarily those required by the United States Office of Education and various units of the State Department of Public Instruction and State government. Such reports appear to be adequate and are well kept.

TABLE 95

EXPENDITURES* FOR EDUCATION IN THE HEALTH OCCUPATIONS IN THE 11 WESTERN STATES FOR 1957-58 AND INDEXES OF SUBSEQUENT EXPENDITURES, BY ALTERNATE YEARS, 1959-60 THROUGH 1963-64

State	Expenditures 1957-58[a]	Index** of expenditures		
		1959-60[a]	1961-62[a]	1963-64[b]
Arizona	$ 36,864	115	124	158
California	396,667	180	286	363
Colorado	46,340	150	236	244
Idaho	25,973	145	283	364
MONTANA	8,884	241	417	311
Nevada	28,327	120	203	211
New Mexico	56,817	127	112	103
Oregon	30,103	212	330	457
Utah	17,186	443	548	613
Washington	116,696	101	302	403
Wyoming	3,593	443	420	478
U.S. (total)	$3,569,830	170	271	349

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1958 through 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964).

* Exclusive of expenditures for vocational guidance.

** 1957-58 is used as the base year (index = 100).

[a] Designated as "practical nursing under Title II of the George-Barden Act."

[b] Designated as "health occupations under Title II of the George-Barden Act."

8. The state staff takes an active part in developing student industrial clubs in the local school districts.

The State Supervisor was instrumental in developing seven clubs during the last two school years. The club movement for trade and industrial education students is quite new throughout the United States, and the State Supervisor has accomplished a great deal in Montana in a short period of time.

9. Statistical and descriptive reports are issued annually showing the complete history, progress, and record of the program for the year.

The writer had the opportunity to review statistical and descriptive reports of the annual trade and industrial program and found them to be complete and apparently quite accurately kept.

10. Records and reports are available which project the program into the immediate future to show program growth, needs, and financial requirements.

Extensive records and projections depicting possible program growth and needs were lacking. In this regard the State Supervisor needs the help of an assistant or aid from some organized research agency.

11. Research and study of an evaluative nature are carried on continuously, and reports of such work are made available for review and further study by others.

As indicated above, there is a dearth of such information available. Research of this kind is important to the planning and operation of trade and industrial programs, and the lack of it needs to be corrected.

12. The state has a functional plan for training teachers which is conducted by a well-qualified staff.

The State Supervisor of Trade and Industrial Education is also the teacher trainer. With his many responsibilities he is unable to spend the necessary time in training teachers. The Northern Montana State College has recently employed an itinerant teacher trainer who is able to offer one course per semester in various school districts. Institutions of higher learning in Montana do not generally offer a full program for the training of trade and industrial education teachers. Most of the teachers contacted by the writer went out of State for their training. Montana is lacking in this respect and needs to develop a functional plan of training trade and industrial education teachers at one of their teacher training institutions.

13. Provision is made for full-time and part-time teachers to receive preservice and inservice teacher training.

The only inservice teacher training given is by the State Supervisor, who as previously indicated is not able because of lack of time to cover adequately this important service. Because of the problems mentioned above, preservice teacher training for the trade teacher coming from the trade into teaching is not adequate. For those who have had industrial experience and have then attended a teacher training institution and received a degree, the preservice training appears to be adequate except for opportunities to develop a philosophy of vocational education.

14. The teacher trainer and his staff provide consultative services for teachers concerning professional growth and assist teachers with instructional problems.

The State Supervisor renders consultative service to teachers; but, as stated, his time is limited for this activity. Montana needs to expand and improve its teacher training program for trade and industrial teachers in one of its teacher training institutions. Because of the limited number of trade teachers employed in Montana, it is doubtful if more than one institution in the State should attempt to provide this type of teacher training.

15. The teacher trainer visits regularly all teachers in training and all schools offering instruction in trade and industrial education.

The pressure of the multifaceted job that the State Supervisor has prevents this criterion being met well. The new itinerant staff member at Northern Montana College has been a help in meeting this important criterion.

Some Problems and Issues in State Supervision of Trade and Industrial Education

The Annual Descriptive Report of Program Activities for Vocational Education, Fiscal Year 1967, states: "Labor shortages in Montana identified by the Montana Employment Service have continued to indicate a need for trained persons in trade and industrial areas. This has been particularly true in the several more densely populated areas. High schools located in these areas, however, offered few programs to meet the indicated needs."[11]

The above statement is but one indication of the need for some form of post-high school education which will not be limited to the needs of high school students. It is not practical or possible for the high schools of Montana to offer a program broad enough or sufficiently mature to meet the needs of all the potential industrial workers or all the needs of industry in Montana.

They also are faced with a continuous problem of keeping the program in trades and industries closely associated with labor and management through the use of active representative advisory committees.

Teacher certification and teacher training are also major problems which will need continuous attention by the State staff. This matter will be discussed in a later section of this chapter but should be mentioned at this time because it is one of the major issues demanding attention in the Montana trade and industrial educational program.

Strong leadership at the local level is a major facet in the success of a trade training program. The State staff is faced with the problem of developing and conducting a long-range program of training directors, supervisors, and coordinators for local programs. Such a program is usually conducted by one of the teacher training institutions in cooperation with the State staff. Advantages of this kind of arrangement are many:

> It places training of instructional and supervisory staff in a teacher training institution where it should be.
>
> It will call for a recognized credential in supervision of trade and industrial classes.
>
> It will offer courses toward an advanced degree.
>
> It will develop a source of supervisory personnel.
>
> It will release the time of the State Supervisor for other activities.

A descriptive brochure, describing the trade and industrial education program, should also be developed. Such a pamphlet could be placed in the hands of school administrators, industrial groups, advisory committees, teacher training institutions, libraries, and other such groups and in places that are considered to be in need of knowledge of the program for trained manpower in public education.

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[11] State of Montana, Department of Public Instruction, Annual Descriptive Report of Program Activities for Vocational Education, Fiscal Year 1967, p. 15.

A General View of the Trade and Industrial Education Program at the Local Level

The trade and industrial education program in Montana in 1967-68 was being offered in 21 high schools, one State College (Northern Montana), two area vocational schools (Helena and Missoula), and one community college (Flathead Valley), making a total of 25 different schools offering this type of program. The locations of these schools, by counties, were shown earlier in Figure 7.

In Table 96 are shown, by three-year intervals, for a 10-year period the enrollments in trade and industrial education classes in Montana and the number of teachers provided for these classes. The data are shown separately for the full-time day trade classes and for the trade extension classes. It can be noted that the trade extension enrollment runs from four to five times the enrollment in the day trade classes. This is typical for many states; often the ratio, however, is even greater. The student-teacher ratio for day trade classes runs from 20 to 28 students for one teacher. In the trade extension classes the ratios are higher, running from 30 to 49 students per teacher.

TABLE 96

ENROLLMENTS IN MONTANA TRADE AND INDUSTRIAL EDUCATION CLASSES, AT THREE-YEAR INTERVALS, 1957-58 THROUGH 1966-67

School year	Day trade classes (Number (full time))		Extension classes (Number)	
	Students	Teachers	Students	Teachers
1957-58	454	23	1,806	59
1960-61	481	20	1,845	55
1963-64	526	19	2,258	46
1966-67	415	18	1,809	61

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1958 through 1961) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal year 1964); Records of the State Supervisor of Trade and Industrial Education (Fiscal year 1967).

In Table 97 are shown data for classes in health occupations in Montana for the same 10-year period as in Table 96, with both student and instructor data shown separately for day preparatory programs and for the refresher or supplementary classes. It can be noted that there is not the same ratio between enrollments in the day and extension (supplementary) classes in health occupations as there was in trade and industrial education classes. The student-teacher ratio in the day classes for all three years shown is approximately 12 students per instructor. For the supplementary classes the ratio varies from 9 to 30 students per teacher.

Readers familiar with the State will note the absence of vocational classes in trades and industry in Billings. This city does offer a type of day course in the trade field; these are not reimbursed from vocational funds. The 1960 census reported 57,500 people in Billings, making it the second city in size in the State, and the projected population for 1975 is

90,100.[12] Along with this growth will come additional industrial workers, which indicate a likely need for a comprehensive program of trade and industrial education in this city.

TABLE 97

ENROLLMENTS IN MONTANA CLASSES IN HEALTH OCCUPATIONS, AT THREE-YEAR INTERVALS, 1957-58 THROUGH 1966-67

School year	Preparatory classes		Supplementary adult classes	
	Number (full time)		Number	
	Students	Teachers	Students*	Teachers
1957-58	0	0	46	5
1960-61	36	3	40	3
1963-64	59	5	172	4
1966-67	97	8	119	4

Source: U.S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1958 through 1961) and *A Review of Activities in Federally Aided Programs* [of] *Vocational and Technical Education* (Fiscal year 1964); Records of the State Supervisor of Trade and Industrial Education (Fiscal year 1967).

* The majority were in practical nursing.

The frequency with which all-day trade and industrial preparatory courses are being offered in Montana schools during the 1967-68 school year is indicated below.

Preparatory courses offered	Number of schools	Preparatory courses offered	Number of schools
Auto Mechanics	15	Welding	6
Automotive Tuneup	3	Carpentry	7
Electrical Appliance Repair	1	Carpentry Mill and Cabinet Work	1
Metal	2		
Drafting	2	Machine Shop	2
Small Engine Repair	2	Industrial Cooperative	2
Graphic Arts	1	Sheet Metal	2
Cosmetology	1	Diesel Mechanics	1
Shop Mechanics	1	Airframes	1
Heavy Equipment Operation and Repair	1	Aircraft Engines	1
		Practical Nursing	4

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[12] Joseph H. Lutz, *The Need for Expanding Vocational Education Opportunities in North Central Montana*, 6-County Vocational School Planning Project, Havre High School District A, Havre, Montana, p. 24.

During 1967-68 there were 66 teachers teaching the courses shown above. These courses are taught in 25 different schools. Courses listed as metal are industrial arts course titles rather than trade and industrial education course titles; in two schools, however, "metals" is listed as a trade and industrial course. In several instances one school offers as many as three separate classes in the same subject.

Shown below is the distribution of the numbers of all-day trade preparatory courses offered in the 25 different schools during 1967-68. It can be seen that 14 schools offer only one course each. One school, on the other hand, offered as many as nine trade and industrial courses. The data were compiled from records on file in the Office of the State Supervisor of Trade and Industrial Education.

Number of courses offered 1967-68	Number of schools	Number of courses offered 1967-68	Number of schools
1	14	6	2
2	2	7	1
3	2	8	0
4	3	9	1
5	0		

In comparing the number of full-time teachers and all-day classes in 1967-68 with those of previous school years, one immediately becomes aware of a sizable increase in the trade and industrial education program. Undoubtedly this has come about through increases in Federal fund allotments and local district realization of the increased need for trained industrial workers.

The trade extension program carried on in the evening hours is just as vital to the needs of Montana's manpower program as the preparatory programs conducted during the day. To say that it is more vital could be justified because all those enrolled will immediately take advantage of their training. The size of the day program, however, usually determines the magnitude of the evening program. Without the training facilities used in the day program, the evening program has difficulty in offering training of practical value.

The kinds of courses and the frequency with which the trade extension, or supplementary, courses were being offered in Montana schools during the 1966-67 school year are shown below. Since the 1967-68 enrollments were not available at the time of the survey, the 1966-67 data are given.

Trade extension courses offered	Number of schools
Auto Mechanics	4
Blue Print Reading	1
Carpentry	7
Diesel Mechanics	1
Electricity	4
Machine and Metal Trades	1
Machine Shop	3
Millwright	1
Painting	1
Plumbers and Fitters	6
Practical Nursing	4
Radio Repair	1
Supervision	1
Sheet Metal	3
Welding	8

In examining the course offerings in the various schools of the State which are listed above, one must realize that in several instances one school may offer several classes in the same subject.

Shown below is the distribution of the numbers of evening trade extension or supplementary courses offered in 12 different schools of the State. It can be seen that two offered only one course each. Two schools on the other hand, offered as many as 11 trade and industrial extension courses. The data were compiled from records on file in the Office of the State Supervisor of Trade and Industrial Education.

Number of extension classes offered 1966-67	Number of schools	Number of extension classes offered 1966-67	Number of schools
1	2	7	1
2	1	8	1
3	1	9	2
4	0	10	0
5	1	11	2
6	1		

Thirteen of the school districts during 1967-68 were using an adult education tax (Adult Education Levy) to assist in supporting adult education. These funds have greatly assisted these school districts in offering trade extension, or supplementary, classes for employed tradesmen. Several school districts, including some larger ones, do not use the adult levy and consequently are not offering as broad a program at public expense as should be available.

Physical Facilities for the Local Trade and Industrial Education Programs

Through visitation to 37 of the 66 Montana teachers of trade and industrial classes and sending questionnaires to all of the 66, the Survey Staff was able to make some determination as to the adequacy of the physical facilities in which classes are held.

The majority of school shops visited were comparatively new, and some were quite adequate while others should have more room to accommodate the program. With the exception of one school visited, those needing new shop facilities were in the process of building new shops or had plans for building new ones.

As indicated earlier in this chapter, questionnaires were sent to all teachers of trade and industrial and practical nurse education. Fifty-nine went to trade and industrial teachers and seven to practical nurse teachers. Forty-three, or 73 per cent, of the trade and industrial teachers, and five of the seven practical nurse instructors responded.

The answers to the question regarding the adequacy of certain facilities are summarized in Table 98.

The reader will note that the large majority of these trade and industrial teachers thought that their teaching facilities were either very adequate or fairly adequate. Examination of the most costly teaching facility (room space) reveals that only 21 per cent of the respondents felt that their shop spaces were adequate. Through personal visitation the writer found that many of the shops, both new and old, were not large enough to accommodate a vocational program. Since shop buildings remain in use for many years, it is suggested that considerable study be given to the size and shape of these spaces and the program to be conducted therein when planning and constructing them. Possibly the planners had an industrial arts program in mind when establishing shop sizes. Projects in the industrial arts classes do not require as much shop space.

TABLE 98

OPINIONS OF THE MONTANA TEACHERS OF TRADE AND INDUSTRIAL EDUCATION (1967-68) CONCERNING THE ADEQUACY OF FACILITIES AND TEACHING MATERIALS

Item	Per cent of respondents indicating		
	Very adequate	Fairly adequate	Inadequate
Room space	21	43	36
Equipment	29	52	19
Textbooks	60	38	2
Library materials	19	50	31
Audio-visual materials	26	48	26

Source: SCHOOL SURVEY SERVICE questionnaires.

While only 19 per cent of the teachers responded that their equipment was inadequate, the Survey Staff visited several schools in which the equipment was quite old; and in the majority there was no standard equipment replacement program being used. Such a procedure establishes an orderly equipment retirement program which can be budgeted yearly and assures reasonably up-to-date equipment which can easily be kept in good repair.

The reader will also notice that a sizable group felt they had inadequate library materials and audio-visual materials. These two areas can rather easily be improved through the expenditure of a comparatively small sum of money by the school district. There may, however, be more to this problem than securing books and visual equipment. During school visitations the writer found few schools with separate rooms for using visual aids or storing and studying library materials. Such rooms are a necessary adjunct to a good vocational trade training program. These rooms can be used jointly by other shop teachers and their classes.

Questionnaires similar to those sent to the trade and industrial teachers were sent also to the seven practical nurse instructors. The answers given by the five respondents regarding the physical facilities in which and with which they carry on their instruction are summarized in Table 99.

An examination of the responses of the practical nurse teachers reveals that 60 per cent stated their room space was not adequate. The writer did not visit all the practical nurse classes but found at least one center where two instructors were teaching. The room space was not large enough, nor could it be arranged properly. Adequate room for housing a program is extremely important to its effectiveness. In this case, as is true in the shop space for the trade training classes, room requirements need to be studied with respect to the activity carried on and the number anticipated in classes. Textbooks were considered the most adequate teaching aid by the respondents.

TABLE 99

OPINIONS OF THE MONTANA PRACTICAL NURSE TEACHERS (1967-68) CONCERNING THE ADEQUACY OF FACILITIES AND TEACHING MATERIALS

Item	Per cent of respondents indicating		
	Very adequate	Fairly adequate	Inadequate
Room space	20	20	60
Equipment	20	80	--
Textbooks	100	--	--
Library materials	--	80	20
Audio-visual materials	--	80	20

Source: SCHOOL SURVEY SERVICE questionnaires.

The Program of Course Work and Related Activities

Of the teachers responding to the questionnaire, 91 per cent stated they were teaching day trade classes, 5 per cent taught part-time cooperative classes, and 40 per cent also taught adult evening classes. One teacher reported he was serving as director of the evening school program, and another one spent half-time as department chairman. In most instances the subjects taught in the evening school were the same as those the teacher taught in the day school. While is somewhat taxing of strength and energy to teach evening classes in addition to day teaching, it does require the instructor to keep abreast of up-to-date methods and practices followed by industry.

In many of the high schools visited, the writer found that the trade and industrial teachers taught an elementary school class for part of the day and an industrial arts class for the balance of the day. Twenty-five per cent of the trade and industrial teachers responding to the survey questionnaire taught also industrial arts classes for part of the day. This practice has the advantage of a student's having had an exploratory experience in an industrial arts area; and when he enrolls on a vocational basis in the same trade area he has had some first-hand knowledge of the occupational field in which he is enrolling. On the other hand there can be disadvantages. The vocational program can easily take on the characteristics of an industrial arts program, or the industrial arts classes may be the same as the vocational class except they are conducted fewer hours per week. Industrial arts classes are usually held one hour a day for the duration of the school semester, while vocational classes are conducted more intensely and for more hours per day.

When a post-high school program such as an area vocational-technical school is available, it is suggested that all vocational training in trade and industry be postponed until after high school graduation and that a strong industrial arts program be made available to the high school students.

In responding to the questionnaire 60 per cent of the teachers stated they had written courses of study and 37 per cent said they did not. It is surprising to learn that so many teachers stated they had no written course to teach by. A course of study should be the first document prepared after a decision has been made to offer the course. Judgments as to building, equipment, teaching materials, and selection of students are all based on a course of study. Lacking a course of study, it is evident that some individual must have given some thought to the subject matter to be taught. The majority of those who had a written course of study had prepared it themselves. In cases where a Federal or State agency prescribed the content of the course, it was adopted by the instructor.

Of those who had an organized written course of study, 35 per cent said that it had been developed or revised during the last school year, 8 per cent said they revised their course of study each year, and 31 per cent were about equally divided between having just revised their course of study or were doing it at the time of answering the questionnaire. Of the respondents who reported use of a course of study, one-third indicated they followed it closely and almost one-half indicated it to be very adequate.

Use of Advisory Committees

Of the 43 respondents to the questionnaire, 32 said they did not have an active advisory committee and eight said they did. The same question was asked by the writer during school visitations, and he found very few schools using lay advisory committees. Such committees usually represent labor and management from the occupational area concerned, with other representation such as the employment service, apprenticeship, schools, and possibly others, depending upon the type of class. The main point is that those selected for committee membership must represent the groups they are selected to represent.

Mentioning advisory committees at this point is timely since courses of study were just discussed. One of the functions of the trade advisory committee is to assist the instructor in preparing or revising the course of study through making suggestions and reviewing course proposals made by the instructors. Throughout the nation successful programs of trade and industrial education have always been identified with functional advisory committees composed of persons who believe in their occupational area and are willing to make the effort to improve that occupational area. Greater utilization of advisory committees across the State could conceivably result in greater support and expansion of the program of trade and industrial education.

Selection, Placement, and Follow-Up of Students

In visiting classes the writer learned that in most schools the students were scheduled into the shop classes by the counselor. In a substantial number of classes visited the instructors felt that some of their students did not profit by this instruction. In most cases it was felt that the students were placed in the wrong class; furthermore, many had had no previous try-out experience in that shop area on an exploratory basis. These instances occurred a sufficient number of times to prompt the writer to mention again the value of the use of exploratory courses and selection tests before scheduling students into vocational classes.

One of the more important items included in the survey questionnaire which was sent to all-day school trade teachers pertained to placement and follow-up of the graduates. About one-half said they were responsible for placement and follow-up of their graduates, while most of the remaining reported that these responsibilities were assigned to others - chiefly to the counselor or to the coordinator of the cooperative training class. A few stated that no one was performing this work in their school.

One cannot pass lightly over the all-important function of placement and follow-up of graduates. It is through placement and follow-up that the instructor learns the effectiveness of his program. One school visited was planning a systematic follow-up of its students through sending them a brief questionnaire each year, asking questions about the strengths and weaknesses of their training program and what job they were currently performing. Such an activity is a necessary part of a successful program and must be budgeted both in time and money.

Support from Local Administration

The writer had the opportunity of discussing trade and industrial education with 14 high school principals and seven superintendents during personal visitation of the trade and industrial classes in nine school districts. As mentioned earlier in this chapter these nine school districts were large, medium, and small in size and were well distributed geographically over the State.

Each administrator expressed a keen interest in doing more for the students who were taking trade training courses. Occasionally one would express doubts as to whether a sufficient number were getting jobs after graduation and at the same time expressed a desire to help remedy the situation.

Questionnaires to 195 secondary school principals in the State, and returned by 145 of them, included several questions about administrative support of trade training classes. From the responses, the Survey Staff is convinced that the administrators are entirely sympathetic to vocational training in the trades and industries and are attempting to find better solutions to the problems of offering such training in their schools.

In responding to the question regarding increase or decrease in enrollment, 45 per cent of the principals whose schools had trade and industrial classes said that during the past three years enrollments had increased in these classes and 10 per cent reported decreases; 30 per cent of those reporting about industrial arts said class enrollments had increased, and 16 per cent reported decreasing enrollments.

Responding to the question as to the extent they thought that industrial arts courses contribute to the development of pupil interest in trade, industrial, service, or technical occupations, the principals answered as shown below.

Extent of contribution	Per cent of respondents
Much	45
Some	50
Little	5

As indicated, the majority of these principals believe that industrial arts classes make a substantial contribution to the trade and industrial program.

About three-fourths of these high school principals indicate that more than 20 per cent of their high school graduates have the ability and interest to profit from two-year post-secondary training for technical or semiprofessional positions; about one-fourth reported that an additional 20 per cent of the graduates would profit from post-high school training for jobs in the skilled and service occupations.

Following are the responses to the question "What percentage of the graduates of your high school go directly into employment?"

Percentage of students going directly into employment	Per cent of respondents
No more than 5 per cent	18
6-10 per cent	24
11-15 per cent	11
16-20 per cent	17
21-30 per cent	17
31-40 per cent	6
41-50 per cent	3
Over 50 per cent	4

The largest group of principals, 24 per cent of them, said that between 6 and 10 per cent of their graduates went directly into employment. While there were some respondents that indicated that over 50 per cent of their graduates went directly into jobs, this group represents only 4 per cent of the principals reporting. Such evidence tends to indicate a need for some form of post-high school education in the vocational training area.

From statements made both orally and in answer to the survey questionnaire, one must conclude that the administrators of the high schools are in support of a vocational program in trades and industries.

Evaluation of the Local Programs of Trade and Industrial Education

Earlier in this chapter, 30 criteria were listed as important items to be observed in determining the quality of a local program of trade and industrial education. All 30 criteria are applicable to any state's program of trade and industrial education, and all were considered by the Survey Staff during this survey. Discussion has already touched upon many of these 30; and while all of them are important, only about one-half of them will be repeated, followed by a brief statement of appraisal concerning Montana's local programs of trade and industrial education.

1. The school administrator and other school personnel show an interest in vocational trade and industrial education and have an understanding of its objectives.

This is generally true of Montana administrators and other school personnel. Although there is some evidence that administrators apparently do not always differentiate well between industrial arts and trade and industrial education, they are sympathetic and attempt to be helpful.

2. The program is under the general direction of a qualified director or supervisor.

Most of the schools throughout the State which have trade and industrial programs offer only a few classes in trade and industrial education; however, there are several schools which offer a sufficient number of day and evening programs to warrant the employment of a local supervisor or director were these programs to continue in the high school. Such districts should give consideration to the establishing of a supervisory position for the total industrial program in their district or area. The responsibilities of a person holding this position would be much different from those of the day or evening principal of a high school.

3. The time spent in on-the-job training is at least 15 hours weekly.

This is not generally true in Montana. Many vocational classes in trade and industrial education meet fewer than 15 hours per week.

4. The program objectives, duties, responsibilities, and cooperative relationships are clearly defined.

Written overall department objectives for the total trade and industrial education program in the schools were not apparent in many school districts. The defining of these objectives is usually the responsibility of the local supervisor or director with the approval of the school administration. Clearly written and well-defined statements in this area are important to the success of the program and are recommended.

5. An employer-employee advisory committee helps plan the program.

This is one of the weak phases of Montana's local programs. As a whole, advisory committees either have not been appointed or do not function properly. There are a few exceptions, however.

6. The curriculum is developed, reviewed, and updated with the assistance of management and labor from craft committees.

As reported above, there are few functioning advisory committees in local districts, a situation which should be changed.

7. Adequate provision is made for supervision of instruction, curriculum and course planning, and inservice programs for teacher education.

Additional provision for inservice teacher education is needed. The State Supervisor needs help in this area, and many schools are unable to give this assistance because of the lack of supervisory staff.

8. The trade and industrial education program is recognized as one part of the total program of education in the school district.

This seemed generally true in the schools visited and was exhibited especially during the writer's discussions with the administrators.

9. A definite procedure exists for determining the needs for trade and industrial training, and both full- and part-time courses are organized upon the basis of the needs which have been demonstrated.

A definite procedure for determining the need for day-school courses was lacking in many high schools. The absence of advisory committees and the apparent lack of contacts with the employment service or school-conducted surveys indicate that trade and industrial courses were established on the basis of school officials' determination only.

10. Instructors are adequately qualified by reason of actual work experience and formal education.

Montana seems to have attracted a staff of well-qualified teachers for trade and industrial education as regards both occupational experience and formal preparation.

11. Instructors are alert to occupational status, changes, and needs of their industrial areas.

Most instructors were concerned about occupational changes and expressed a need to attend factory schools, industrial institutes, etc. This is an area needing attention. Some method of bringing more short-term industrial institutes or workshops to Montana's trade and industrial education teachers is needed.

12. Students are admitted to classes upon the basis of counseling and guidance screening, including a battery of tests.

In some of the larger vocational education centers a decided effort is being made to select and counsel students into vocational classes, but in many high schools this is rarely the case and is considered by the Survey Staff to be a major weakness in most of the local programs.

13. Follow-up records and data are kept concerning student performance on the job.

Only a small number of instructors of the Montana classes visited could produce records of student achievement on the job. Follow-up surveys of graduates have been conducted in some localities, however.

14. The instructional program is reviewed by advisory committees.

Program review by advisory committees is rare since few schools have active committees; many, in fact, do not have any committees.

Post-Secondary Education in Trade and Industrial Education

For many years post-secondary vocational programs have been a part of the educational system of every state in the union. Such programs fill the training needs of many people and for a variety of different reasons. Post-secondary vocational education meets the needs of such individuals as:

1. Post-high school youth who have finished high school without any, or a sufficient amount, of training in a specific occupation to be employable
2. Adults who have had a small amount of training and need additional skills and related knowledge to become successful employees
3. School dropouts who realize that some specific training is necessary to gain employment
4. Employed individuals who need to learn new processes because of changes in production techniques
5. Apprentices who need related and supplemental instruction to complete their indenture agreement

School districts are faced with many problems in offering vocational programs to meet the needs of the above mentioned groups. The high school administrator is faced with an educational program which prepares youth for adulthood and involves many problems pertinent to the growth and development of youth. To attempt an expanded program of meeting the needs of adults as well as those of the youth is not possible in the same institution. The two programs are not compatible. One alternative is to develop a post-secondary school which will be faced only with meeting the educational problems of those who are intent on preparation for immediate employment or those who are employed and need additional training.

Maturity is an additional factor in determining the need for post-high school vocational education. When a person reaches the age at which he has made up his mind about the occupation he wants to follow, he is usually past high school age and is seriously considering his future. One must hasten to add, however, that many high school students do choose their life's occupation during their high school career and have been quite successful as adults, but this experience is the exception rather than the rule.

Vocational course offerings at the post-secondary level need to be selected carefully in order that the student will have assurance that employment is available on completion of the course. Advisory committees composed of representation from the Employment Service and employers and employees from the craft area concerned can render most valuable information to the school administration in determining course offerings. Area surveys are also valuable, provided the mechanics of conducting the survey do not take so much time that the decision to offer the course is delayed to the point that community and prospective student interest is lost.

Trade and industrial teachers were asked in the questionnaire to give their opinions regarding offering post-high school trade and industrial education. Their responses are summarized as follows:

Post-high school preparation	Per cent responding "Yes"
Should be provided in regional or area vocational schools, junior colleges, or technical institutes	86
Should be provided locally by the high school trade and industrial department in evening classes or in grades 13 and 14	12
No need for post-high school training of this kind	2

The above response indicates that the great majority of trade and industrial teachers believe that there is a definite need for post-high school classes in trade training subjects to be offered in some type of post-secondary school.

Questionnaires sent to the superintendents of the State included the question, "Should public education prepare youth not planning to attend a four-year college for entrance into jobs such as sales, office, skilled and technical employment?" Ninety-six per cent of these respondents said, "Yes." Their first-choice preferences for the type of school to provide this type of education follow.

Type of school preferred to provide this type of preparation	Per cent of respondents
Area vocational and technical high schools	29
Local comprehensive high schools	29
Area vocational-technical post-high schools	25
Local vocational-technical high schools	11
Community or junior colleges	5
Four-year colleges	1

It is clear that the large majority of Montana school superintendents are in favor of school programs which will prepare the non-college bound youth for jobs in the various occupational fields which do not require a college degree. While there was difference of opinion as to the type of school needed, their responses to another question indicated that a comprehensive program of offerings is needed. More than 50 per cent of them indicated that training programs were very much needed for auto body and fender repairmen, automobile mechanic, carpenter, diesel mechanic, construction electrician, farm machinery mechanic, practical nurse, plumber, and radio-TV serviceman.

Courses which have a more limited demand such as aircraft repair, heavy duty equipment operation, lumbering courses, etc. should not be offered in all areas but limited to one or two post-secondary schools where a strong, well-equipped program can be offered. Program planning for trade training courses needs Statewide consideration to avoid costly duplication of equipment and facilities and also to determine the requirements for trained manpower. A State Advisory Committee for Trade and Industrial Education composed of the appropriate representation from labor and management and government agencies such as the Employment Service and Apprenticeship Agencies would be able to give valuable assistance in the determination of courses to be offered in the various areas of the State.

The writer interviewed 14 employers, managers of Employment Service Offices, and officers of the State AFL-CIO. Each of these individuals indicated a definite need for post-high school education in trades and industries.

Several states have adopted the area vocational school concept and are operating successfully. The limited experience Montana school people have had with conducting area vocational schools indicates that some type of area or regional school is likely to be successful and meet a decided need. Montana vocational educators are very much interested in a limited number of regional vocational schools. They are to be commended for their attitudes and efforts in this direction.

Looking toward the future expansion of trade and industrial education in Montana, all indications point toward the need for establishing a very limited number of regional vocational-technical schools. These schools need to be established geographically in locations which will meet the needs of those needing training in all major sections of the State.

The State Board for Vocational Education's criteria for designating area schools is based on population, secondary school enrollment, and taxable valuation. These factors, coupled with labor force growth patterns and projected population increases, will enable the school authorities to approve a system of regional schools, geographically located in such a manner as will meet the State's trained manpower needs.

Teacher Recruitment, Selection, Certification, and Training

The trade and industrial education program during the year 1967-68 involved 59 full-time teachers of reimbursed vocational trade training classes and seven teachers of practical nursing. The number of part-time teachers was unavailable until the close of the 1967-68 school year, but during 1966-67 there were 61 part-time teachers teaching trade extension classes. The State requires for certification that all trade and industrial instructors complete a program of professional preparation designed especially for trade and industrial instructors. By reason of actual employment as craftsmen, all instructors have acquired a degree of occupational competency which is satisfactory to the State.

Trade and industrial teachers may be certified with a Montana Class 1, 2, or 4 teaching certificate. Class 1 and 2 certificates require a Bachelor's degree; and each certificate may be renewed every five years. The essential difference between the two certificates is that Class 1 (professional) requires one year of planned study beyond the baccalaureate degree and requires one year of successful teaching at the elementary or secondary level for the five-year renewal. The Class 2 (standard) teaching certificate requires the completion of an approved teacher education program and a Bachelor's degree. It is renewable every five years on completion of one year of successful elementary school or secondary school teaching and by completing four semester credits in courses which will supplement and strengthen the applicant's teaching.

The Class 4 special certificate (vocational, recreation, and adult) is issued to applicants meeting the training and experience required by the United States Office of Education or by special needs of these fields. Since requirements vary, the applicant must write to the Superintendent of Public Instruction for details. Except for teaching in highly specialized or technological areas, these special certificates are not issued to teachers in vocational education programs which are part of a regular high school program. Such teachers are certificated under Class 1 or 2.

The Class 4 certificate is renewable every five years on completion of one year of successful teaching experience during the five years, plus the completion of four semester credits in professional course work, or in technical study, or the equivalent in industrial experience as determined in consultation with the teacher's supervisor. The Class 4 certificate is usually granted to persons with highly technical competencies such as journeymen and for demonstrated ability and teaching proficiencies but not necessarily requiring a Bachelor's degree.

The educational program for teachers usually includes courses in philosophy of vocational education, methods of teaching vocational subjects, shop organization and control, job analysis, preparation of instructional materials, and other courses appropriate to teaching trade training subjects.

With the exception of the Class 4 Special Certificate all certificates require a Bachelor's degree. For those teachers who have had occupational experience and then attend a teacher training institution and earn a Bachelor's degree before teaching, the problem of meeting certification requirements is not a great obstacle. Those who are teaching on the Class 4 certificate find it difficult to take the necessary renewal courses in the trade and industrial field in Montana institutions, and many have had to go out of State for their schooling.

Fourteen out of the 36 teachers visited by the writer wanted a comprehensive program in Montana for trade teachers and felt that one institution should be selected to offer this expanded program. The majority felt that the plans for an expanded program at Northern Montana College would greatly assist.

Over one-half of the group interviewed felt a definite need of keeping abreast of their trade advancements and wanted craft workships or institutes offered with college credit. The General Motors Institutes for public school teachers were often mentioned as an example. A sizable group wanted some of the teacher training institutions in Montana to offer a Master's degree program in vocational education.

The questionnaire for trade and industrial teachers included a question pertaining to the adequacy of the preservice and inservice teacher training program for trade and industrial teachers. Twenty-six per cent of the respondents rated the program fairly adequate and the remainder rated it as inadequate. The type of statement made most often by the respondents is illustrated by the following:

> More courses are needed for trade and industrial teachers.
>
> State institutions should offer graduate work in vocational education.
>
> Need more teacher training facilities.

The bulletin entitled "Certification of Teachers and School Administrators In Montana," dated February, 1966, briefly describes the various classes of certificates available in Montana. The Survey Staff is of the opinion that the requirements outlined in the bulletin for the trade and industrial teacher are not sufficiently clear, nor are they explained in sufficient detail. A brochure describing the various ways a tradesman or technician could obtain a teaching certificate would undoubtedly assist in recruiting competent people into the teaching profession. The development of such a pamphlet is greatly needed.

The Survey Staff did not detect a high rate of trade and industrial teacher turnover. While visiting schools some new teachers were met, but the number was not large enough to be deemed unusual. In reviewing the class offerings over the past several years, the same instructors' names appear quite regularly. Apparently the trade and industrial education teachers in Montana, as a group, are satisfied with their teaching positions and do not move about to any appreciable degree.

Attitudes of Montana Groups Toward Trade and Industrial Education

Earlier in this chapter mention was made of a questionnaire sent to Montana school superintendents. In the last section of the questionnaire the superintendents were asked to add any opinions or comments that they believed would assist those responsible for conducting the vocational-technical survey in Montana. Three of their comments are quoted here because they indicate the general attitude of a number of the group toward vocational education.

> We feel that greater emphasis should be placed on preparatory skills in the secondary schools and less emphasis on the college preparatory curriculum. More skills should be investigated to assist non-college students to adequately prepare themselves for a chosen profession.
>
> It is my belief that with a vocational-technical facility here we could train our non-college bound to take advantage of the employment opportunities in this part of the State.
>
> We need to broaden our offerings in vocational areas. We have jumped from one to three teachers in the past two years because of development in the vocational area and because of expanding student body.

It is sufficient to say that such statements occurred often enough to be convincing that a sizable majority of these administrators feel there is a definite need for vocational training in Montana.

During the school visitation portion of the survey, the writer asked the instructors whether they thought there was need for post-high trade training classes to be offered in their teaching area. Twenty-eight of the 36 visited were of the opinion that post-high school classes were needed very much in their teaching fields.

Questionnaires from Montana manufacturers indicated that these respondents did not have much experience in employing graduates from high school vocational programs or from two-year technical school programs. In their free responses, however, a number of them indicated that they think there is a need in Montana for schools beyond high school to provide vocational and technical training. Some stated that most high school students are not sufficiently mature for most jobs, but that one or two years of post-high school vocational training would give them added skills and would contribute to their maturity so that they could accept job responsibility.

Fourteen employers were interviewed by the writer in various parts of the State. Only five of these 14 had had any experience with schools which prepare skilled or technical workers, and they indicated they were unable to evaluate the schools' vocational offerings. Each of the employers interviewed felt that there was a great need for post-high school trade and technical-vocational education in their area and that it was long past due. They considered that training was especially needed in the building trades and for appliance and television service, auto mechanics, and bakers. Twelve of these 14 expressed a willingness to act in an advisory capacity to a vocational school in their area; all of them indicated that vocational-technical offerings should be expanded and that upgrading courses as well as pre-employment courses should be provided. These employers seemed to believe that between four and six area schools should be established in the major populated areas of the State.

A special questionnaire form was sent to representatives of Montana Chambers of Commerce, Trade Associations, and advisory groups interested in vocational-technical education. A few of their comments are quoted below which are representative of the reactions of many of them.

> Montana industry and commerce, as well as attempts to promote new industry and commerce, are presently checked because of the lack of properly trained personnel.
>
> More schools and facilities are needed to train high school graduates in a trade or as a technician.
>
> We need to develop some way to interest and train young people for the skilled and semiskilled categories that we need so desperately. Many skills are needing recruitments and not able to find them while at the same time there is considerable unemployment. We must train these people and keep them here if at all possible.
>
> There is need for vocational-technical schools to be located in certain designated areas throughout the State. The school located in a designated area ought to be confined to the teaching of five or six vocations that are commensurate with the area and not try to teach 25 or 30 vocations. The different areas would then give the State a well-rounded program of vocational education even if a student had to attend school in a different area in order to obtain the training of his choice.

The interest shown by the Legislative Assembly in passing legislation authorizing the counties to pay tuition to other counties for students attending area vocational-technical schools in another county demonstrates the State's interest in expanding vocational education opportunities to all students.

The combined interest of the State, of many organizations in Montana, of the local school districts, and of the people themselves is a strong indication that Montana has reached the point of taking definite steps toward expanding vocational opportunities throughout their State.

PART II - TECHNICAL EDUCATION

Technical education has been associated with the vocational education curriculum in the United States for at least three decades. During the early thirties programs of a "technical institute type" were developed throughout the nation. For a number of years the growth was small, and instruction was largely post-secondary. Although different from the courses commonly found in the trade and industrial education program, data for the technical institute type programs were reported as part of the total program offering in trade and industrial education.

Vocational education experiences gained during World War II, together with the rapid development of technology related programs, focused attention upon training for a new kind of industrial employee known as a technician. National and regional conferences were held in connection with the general development of technical education programs during 1950's; and, with the advent of the National Defense Education Act, 1958 (Title VIII), provision was made for training highly skilled technicians. National data concerning such training were reported for the first time in 1959.

Technical education programs were offered in high schools, area schools, junior and community colleges, technical institutes, and in colleges and universities having nondegree technical type programs. Many states developed area schools in response to this particular need. In general, the programs were of two types: (a) preparatory, which prepared youth to enter into recognized technical occupations, and (b) extension, which made it possible for persons engaged in technical occupations to keep up with technological developments. By 1967 approximately 260,000 persons were enrolled in technical education programs throughout the nation.

The need for technical education programs, which were first closely related to engineering occupations, has been demonstrated to exist in other fields such as business and office occupations, agricultural occupations, and health occupations. The national trend for technicians in many fields is definitely upward, and the need for technical-type employees is increasing in every state almost continuously.

Technology in Montana

In recent years a four-year program of technology has developed in many places throughout the nation in response to an employment need for persons who are not required to have the depth of study normally associated with engineering. Such a program is exemplified in Montana by the programs in Mechanical Technology and Construction Technology at Montana State University. Technology programs prepare "technologists," and the labor market for such persons appears to be expanding.

In contrast, the three-year technical program conducted at Northern Montana College leading to an Associate degree prepares "technicians" in the chemical, construction, electronics, and mechanical areas.

In order to differentiate the technical education programs now in operation in Montana and projected for the future, it seems appropriate to assume that the four-year technology program at Montana State University prepare "technologists" and the two- and three-year programs at Northern Montana College and at the area schools prepare "technicians." It follows, therefore, that the preparation of technicians would be an appropriate goal for area or regional schools.

In 1967-68 there were technical education programs in 12 Montana schools. Seven of these were high schools, two were area vocational schools (Helena and Missoula), one was Northern Montana College, and two were community colleges (Dawson College and Flathead Valley College). Figure 9 shows the locations of the cities in which are the 12 schools having technical education programs. Two-thirds of the schools are in the western half of the State. They are located in 10 different counties.

Enrollment in Technical Education

The technical education enrollments for Montana for a six-year period are shown in Table 100. There has been a relatively steady increase in enrollment, with the most recent enrollment shown being the largest. For the period there has been an increase of 427 per cent. The more rapid increases in the last two years can be accounted for in part by the influence of the Vocational Education Act of 1963.

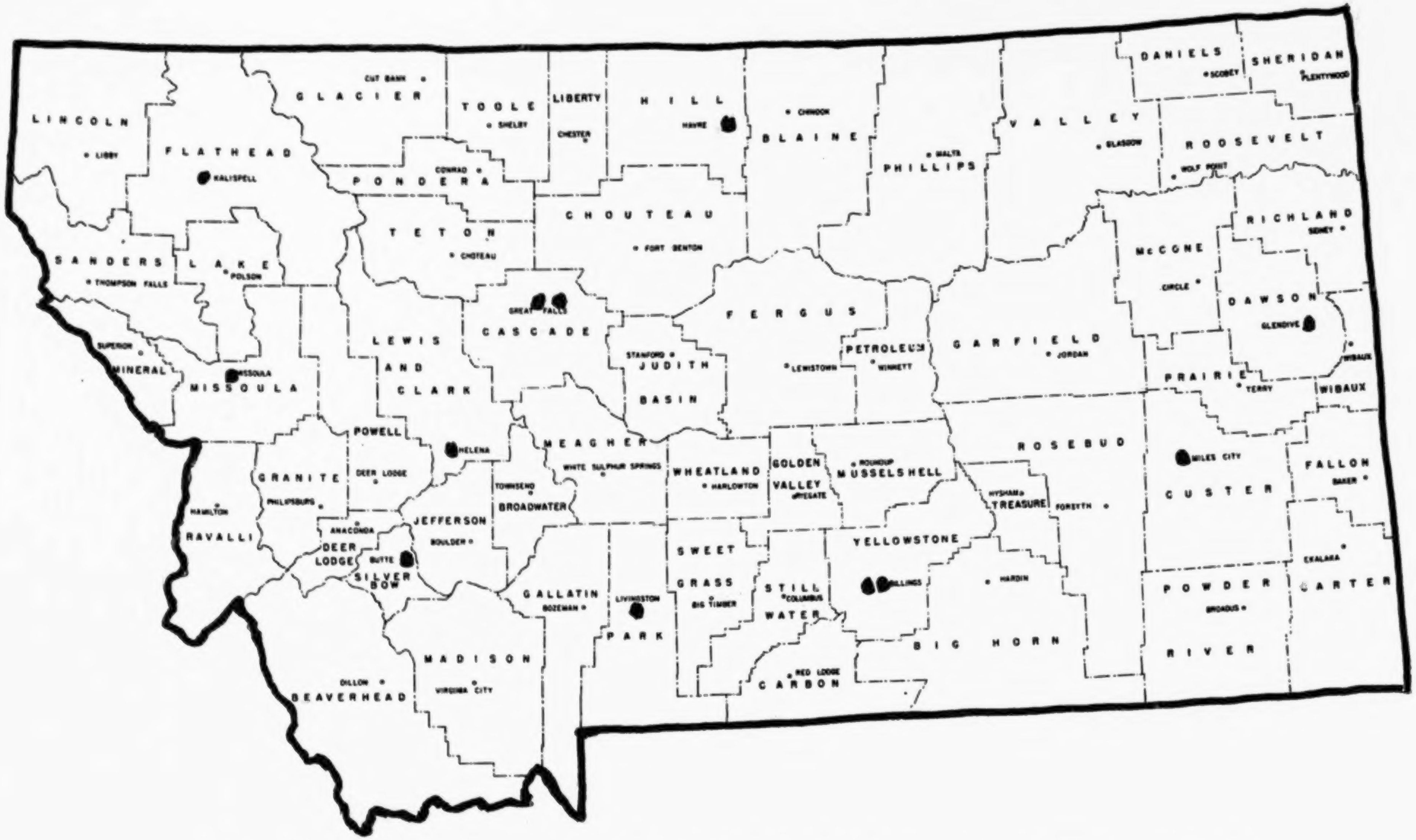
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
MINERAL
SUPERIOR
MISSOULA
MISSOULA
LEWIS AND CLARK
HELENA
CASCADE
GREAT FALLS
JUDITH BASIN
STANFORD
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
GARFIELD
JORDAN
McCONE
CIRCLE
RICHLAND
SIDNEY
DAWSON
GLENDIVE
PRAIRIE
TERRY
WIBAUX
WIBAUX
POWELL
DEER LODGE
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
DEER LODGE
ANACONDA
SILVER BOW
BUTTE
JEFFERSON
BOULDER
BROADWATER
TOWNSEND
MEAGHER
WHITE SULPHUR SPRINGS
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
ROSEBUD
FORSYTH
TREASURE
HYSHAM
CUSTER
MILES CITY
FALLON
BAKER
BEAVERHEAD
DILLON
MADISON
VIRGINIA CITY
GALLATIN
BOZEMAN
PARK
LIVINGSTON
SWEET GRASS
BIG TIMBER
STILL WATER
COLUMBUS
CARBON
RED LODGE
YELLOWSTONE
BILLINGS
BIG HORN
HARDIN
POWDER RIVER
BROADUS
CARTER
EKALAKA

Figure 9. Locations, by counties, of the technical education programs in Montana schools, 1967-68

(Source: Montana's State Supervisor of Technical Education)

TABLE 100

ENROLLMENTS IN TECHNICAL EDUCATION IN MONTANA, 1960-61 THROUGH 1965-66

School year	Number	Index*
1960-61	223	100
1961-62	416	187
1962-63	469	210
1963-64	461	207
1964-65	757	339
1965-66	1,176	527

Source: U. S. Office of Education, _Digest of Annual Reports of State Boards for Vocational Education_ (Fiscal years 1961 and 1962) and _A Review of Activities in Federally Aided Programs_ [of] _Vocational and Technical Education_ (Fiscal years 1963 and 1964); and Office of Montana's State Director of Vocational Education (Fiscal years 1965 and 1966).

* 1960-61 is used as the base year (index = 100).

In Table 101 comparative data regarding enrollments in technical education for a four-year period are shown for the 11 Western states. The pattern is that of rather consistent and reasonably rapid growth when compared with the base year of 1960-61. For the three years for which indexes have been computed, Montana ranked first, second, and fifth, respectively, among the 11 states.

When the enrollments in technical education for 1965-66 are related to current populations of the 11 Western states to determine the number of enrollees for each 100,000 population, Montana ranks fourth. She is outranked by Nevada (first), Washington (second), and California (third).

Expenditures for Technical Education

The Montana expenditures for technical education for a recent four-year period are shown in Table 102. The amount at the end of the period represents a 46 per cent increase over that for the first year.

In Table 103 the expenditures for technical education in the 11 Western states are shown. The pattern of increases in expenditures is naturally quite similar to the pattern of enrollment growth shown earlier in Table 101. For the last year of the period Montana's index ranks eighth among those of the 11 states.

Questionnaire to Technical Education Instructors

Questionnaires were sent to the 38 technical education instructors in Montana in 1967-68 as a part of the general assessment and review of the program of technical education; 74 per cent of them returned completed questionnaires.

Slightly over two-thirds of the respondents are assigned only day classes and the remainder have both day and evening classes. The majority (69 per cent) taught in the technical field full time. Three-fourths of the teachers hold baccalaureate or Master's degrees in a wide range of subject matter preparation. This preparation has been supplemented by a variety of specialized post-graduate and certificate training programs with one-half of the group indicating teacher preparation as recent as 1967.

TABLE 101

ENROLLMENTS IN TECHNICAL EDUCATION IN THE 11 WESTERN STATES FOR 1960-61 AND INDEXES OF SUBSEQUENT ENROLLMENTS, 1961-62 THROUGH 1963-64

State	Enrollment	Index* of enrollment		
	1960-61[a]	1961-62[b]	1962-63[b]	1963-64[b]
Arizona	1,432	141	123	112
California	36,795	136	178	191
Colorado	1,137	142	154	275
Idaho	473	110	95	102
MONTANA	223	187	210	207
Nevada	1,235	114	155	189
New Mexico	318	125	117	260
Oregon	818	125	128	140
Utah	504	138	360	387
Washington	9,992	113	138	108
Wyoming	14	107	114	250
U.S. (total)	122,952	121	150	180

Source: U.S. Office of Education, *Digest of Annual Reports of State Boards for Vocational Education* (Fiscal years 1961 and 1962) and *A Review of Activities in Federally Aided Programs* [of] *Vocational and Technical Education* (Fiscal years 1963 and 1964).

* 1960-61 is used as the base year (index = 100).

[a] Designated as "area vocational education programs under Title III of the George-Barden Act."

[b] Designated as "technical education programs under Title III of the George-Barden Act."

In the total teaching experience the technical teachers in Montana fall into three approximately equal groups: (a) no more than five years of experience, (b) six to 10 years, and (c) more than 10 years.

All of the instructors indicated that they attempt to coordinate the manipulative and skill instruction of their programs with the technical instruction, and three-fourths of the instructors have organized written courses of study.

One of the items in the questionnaire sent to technical education instructors dealt with certain environmental aspects of their teaching situation. The responses to this item are summarized in Table 104. According to the data shown, greatest adequacy is indicated for room space and textbooks and least for library materials for students.

TABLE 102

EXPENDITURES* FOR TECHNICAL EDUCATION IN MONTANA, 1960-61 THROUGH 1963-64

School year	Amount	Index**
1960-61	$53,950	100
1961-62	43,167	80
1962-63	54,785	102
1963-64	78,639	136

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1961 and 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1960-61 is used as the base year (index = 100).

Since technical education programs are comparatively new, much time and effort are required in the planning of such programs. Table 105 summarizes the responses of the instructors regarding the source(s) of assistance in their planning of the instructional program. From the information shown in the table, it appears that the greatest source of help was from the school administrator, with the State vocational staff ranking second.

Of great importance in any educational program are the continuing efforts made in improving the program in order for it to keep up with changing conditions. The reactions of these instructors as to the assistance provided them in their improving of their vocational programs are presented in Table 106. Again, the school administrator ranks highest as a source of help.

In Table 107 is shown a summary of the responses of the technical education instructors concerning the help provided them by three important inservice activities. While a sizable proportion of the respondents indicate very little assistance for each of the three, approximately one-third of the respondents reported very much help for each, with attendance at summer school ranking highest.

The Teacher's Program and Off-Campus Working Relationships

Fewer than one-half of the instructors provide assistance to their graduates in occupational placement or in securing summer employment. In general, these instructors believe their programs are meeting the needs of high school pupils, but more than one-half of them indicated that they are not very successful in meeting the needs of the post-secondary and adult students. About half of the instructors felt they were training about the right number of persons for employment, and the remainder felt they were preparing too few. They are nearly unanimous in feeling that the adult program in technical education should be expanded.

TABLE 103

EXPENDITURES* FOR TECHNICAL EDUCATION IN THE 11 WESTERN STATES FOR 1960-61 AND INDEXES OF SUBSEQUENT EXPENDITURES, 1961-62 THROUGH 1963-64

State	Expenditures 1960-61[a]	Index** of expenditures		
		1961-62[b]	1962-63[b]	1963-64[b]
Arizona	$ 99,756	127	167	197
California	2,476,735	138	195	178
Colorado	216,710	173	231	167
Idaho	165,699	126	140	122
MONTANA	53,950	80	102	146
Nevada	121,265	121	134	136
New Mexico	84,770	129	238	212
Oregon	235,966	132	143	141
Utah	149,670	125	165	180
Washington	518,618	152	262	246
Wyoming	5,406	257	273	380
U.S.(total)	$18,406,046	134	177	190

Source: U.S. Office of Education, Digest of Annual Reports of State Boards for Vocational Education (Fiscal years 1961 and 1962) and A Review of Activities in Federally Aided Programs [of] Vocational and Technical Education (Fiscal years 1963 and 1964).

* Exclusive of expenditures for vocational guidance.

** 1960-61 is used as the base year (index = 100).

[a] Designated as "area vocational education programs under Title III of the George-Barden Act."

[b] Designated as "technical education programs under Title III of the George-Barden Act."

Instructors indicate 3 to 1 that their relationships with management are satisfactory, are about evenly divided about the quality of their relationships with labor and chambers of commerce, and indicate 2 to 1 that their relationships with the State Employment Service are satisfactory.

Location of Post-Secondary Education

Responses to the question "Where should post-high school education be provided?" show that regional or area vocational-technical schools topped the list, with sentiment for locating the technical education program in junior or community college coming next. There were a few who felt that technical programs should be provided by the high school department in evening classes or in grades 13 and 14; and one person felt that such training was unnecessary.

TABLE 104

OPINIONS OF THE MONTANA TECHNICAL EDUCATION INSTRUCTORS (1967-68) REGARDING THE ADEQUACY OF CERTAIN TEACHING ENVIRONMENTAL FACTORS

Teaching environmental factor	Per cent of respondents indicating		
	Very adequate	Fairly adequate	Inadequate
Room space	57	32	11
Equipment	36	43	21
Textbooks	43	46	11
Library materials for students	7	54	39
Reference and resource teaching materials	25	54	21
Audio-visual materials	21	54	25

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 105

RESPONSES OF THE MONTANA TECHNICAL EDUCATION INSTRUCTORS (1967-68) REGARDING THE EXTENT OF ASSISTANCE PROVIDED THE RESPONDENT IN PLANNING HIS VOCATIONAL PROGRAM

Group or individual providing assistance	Per cent of respondents indicating		
	Much or very much	Some (average)	Very little or none
The administrator of the school	55	15	30
State vocational staff	23	27	50
Vocational teacher trainers	16	8	76
Students	8	33	60
Parents	--	15	85
Representative advisory committees	16	16	68

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 106

RESPONSES OF THE MONTANA TECHNICAL EDUCATION INSTRUCTORS (1967-68) REGARDING THE EXTENT OF ASSISTANCE PROVIDED THE RESPONDENT FOR HIS IMPROVING HIS VOCATIONAL PROGRAM

Group or individual providing assistance	Per cent of respondents indicating		
	Much or very much	Some (average)	Very little or none
The administrator of the school	42	31	27
State vocational staff	12	24	64
Vocational teacher trainers	11	11	78
Students	8	36	56
Parents	--	16	84
Representative advisory committees	16	12	72

Source: SCHOOL SURVEY SERVICE questionnaires.

TABLE 107

RESPONSES OF THE MONTANA TECHNICAL EDUCATION INSTRUCTORS (1967-68) REGARDING THE EXTENT OF INSERVICE HELP IN HIS TEACHING FIELD

Type of assistance	Per cent of respondents indicating		
	Much or very much	Some (average)	Very little or none
Conferences	32	16	52
Workshops	33	4	63
Attendance at summer school	42	12	46

Source: SCHOOL SURVEY SERVICE questionnaires.

Attitudes of Others Concerning Technical Education

Many people in the State of Montana have interests and concerns about technical education. Some see the program from the point of view of an employer, an employee, an educator, a business man, or as a person interested in the growth and development of Montana as a State. It has been generally accepted that wherever people are employed, a need for vocational-technical education exists. Furthermore, the general sophistication of employment indicates technical education as a part of this need. So it was not surprising to find among the population in Montana an overwhelming attitude about the need for technical education as a part of the total educational preparation of youth and adults.

Questionnaires to manufacturers in Montana were returned by 151 firms representing about 12,000 employees, of whom from 5 to 7 per cent were identified as technicians. An employment demand for technicians exists which has been satisfied in part by graduates from a variety of schools within the State. Most companies require some on-the-job training of new technicians in order for the employee to adjust to the processes of the company concerned. The experience of employers with technicians from Montana schools has been good. Some employers expressed difficulty in getting the kind of technicians needed and indicated that technicians should have both practical and theoretical backgrounds in science and mathematics as a part of a much broader background of preparation.

The indicated need for technicians for replacement and expansion was not large; however, a substantial number of job titles were indicated for future employment of technicians. Manufacturers were generally of the opinion that shortages existed in Montana for technical personnel; they see a need for post-secondary school preparation and they want people who have learned to work.

Questionnaires from 152 business firms in the State sustained generally the need for technical training and pointed out in particular a need in the area of electrical and electronics technicians.

Forty-six representatives of chambers of commerce, trade associations, and other special groups in the State responded to the questionnaire concerning the need for technical education in Montana. The response of this group supported the need for technical education in a variety of occupational areas. The point was made that the State was not adequately covered by schools offering technical education and that "centers" could be developed to concentrate such instruction. It was suggested also that these centers operate in such a manner as to meet the needs of many persons who were not full-time "in-school" students.

Questionnaires returned by 190 school superintendents indicated an unqualified "yes" that public education should prepare youth for entrance upon technical employment. They believed that it was the responsibility of the State to provide post-secondary residential programs.

The response of 145 Montana high school principals in regard to technical education did not differ significantly from that of school superintendents. They urged development of an expanded program of technical education.

Eight of the nine persons holding positions as directors (or coordinators) of vocational-technical education responded to their survey questionnaires. Their future plans show considerable attention to the need for greater emphasis upon the development of technical education programs. They have recognized in their planning, the problems of distance, the need for expanded adult phases of technical education, the desirability of post-secondary instruction, and an imperative need to allocate certain programs to certain schools. They seem to be in complete accord with other groups regarding the necessity to expand technical education in Montana.

Planning for Technical Education

Planning at the State level for the general development of technical education in Montana appears to be sound and follows proven criteria. The State Supervisor of Technical Education has accepted the general criteria, recommended by the U.S. Office of Education, as appropriate for identification of technical occupations.

The basic objectives of technical education to be applied in Montana have been cited by the State Office as follows:

1. To produce a competent worker and citizen with saleable skills for employment
2. To develop the prospective workers' fundamental skills and knowledge that is related to the occupational field
3. To help the student develop and improve those desirable physical, mental, and social traits which will result in personal satisfaction as a good citizen
4. To provide a wholesome environment in which students may develop proper attitudes and safe working habits
5. To make available within the present educational structure, technical education opportunities for the high school and post-high school students
6. To provide full opportunity for a balanced educational program
7. To provide a curriculum designed to train the technical worker in an occupational skill

Upon the basis of these objectives the following standards have been used by the State Supervisor to define the technical education curriculum:

1. The curriculum must prepare the student for employment.
2. The curriculum must establish a learning achievement level compatible with occupation entry level.
3. Course titles, descriptions, and contents must be realistic and clearly defined.
4. All related subject matter will be applicable to a specific technology.
5. In developing the curriculum, emphasis will be placed on both applied sciences and manipulative skills.
6. The curriculum should be developed upon sound basic philosophies of vocational education.
7. The curriculum must maintain a logical balance between related theory and occupational skills.
8. The curriculum must be sensitive to occupational changes and technological advances in the industry.
9. The training need not be confined to those fields of employment found in the local community.

10. The curriculum must be developed and continually evaluated through the advice, counsel, and support of the industry.

11. The curriculum should meet the standards of national policies and the State Plan.

Concerning the need for technical education in Montana opinions of representatives of business, industry, and school personnel seem to be in general agreement that programs of technical education are appropriate and imperative. Despite a substantial increase in enrollment in technical education in recent years the range of occupational opportunity provided in Montana is not large. Both distance and sparse population make expansion difficult. However, a Statewide program covering a wide variety of technical education courses can be achieved by selective assignment of certain courses to certain schools. Unnecessary duplication of effort must be carefully avoided. Obviously some programs may be offered in all schools, but some programs need to be offered in only one school in order to serve Statewide needs. Planning for technical education must involve all the schools concerned, and specific course determination should be based upon the nature of the trends of occupational "demand" - State, regional, and national.

The general commitment among teachers and other school personnel concerning the desire to provide expanded programs of technical education for in-school students and for out-of-school youth and adults is excellent. However, action to move ahead (despite significant increases in enrollment in 1965 and 1966) appears to lag.

Montana rates high among the Western states in its effort to provide technical education as reflected by the number of enrollees per 100,000 population. However, the further development of technical education (and more appropriate development) will depend upon providing post-secondary facilities for both in-school students and out-of-school youth and adults. Advisory committees properly constituted and used on an active basis must be developed for all programs of technical education. Follow-up and follow-through studies of graduates must be organized and the data used as a means of review and evaluation of technical education. Teacher education for technical teachers must be strengthened and provision made for inservice programs for technical teachers. In general, a new professional rapport among technical education teachers in Montana must emerge.

CHAPTER 6[*]

VOCATIONAL GUIDANCE AND OCCUPATIONAL INFORMATION

When planning for the initiation or extension of vocational-technical education, whether at the state, area, or local level, the following four broad criteria must be continuously and carefully considered: (a) the occupational pattern of the area in question - or the labor market to which graduate trainees will be going; (b) the attitude of labor market employers toward employment of the end products of the various training programs (and, in some instances, toward the employment of trainees enrolled in cooperative-type training programs); (c) the ability of the state, area, or community to provide adequate staff and facilities for the programs in question; and (d) the availability of an adequate supply of interested and qualified applicants for the training programs being considered. In order to justify its continuing existence or further development, vocational-technical education in any state must be realistic in terms of all four of these criteria.

One of the major objectives of any school guidance program is related to the fourth of these criteria: the availability of an adequate supply of interested and qualified applicants for the training programs being considered. This is not meant to imply that the guidance program is a recruiting agent for vocational-technical education. Rather, it emphasizes the responsibility of school counselors to assist students to make sound educational and vocational plans based on self-understanding and on a knowledge of training and employment opportunities and demands. To assure all students this assistance, schools must provide adequate occupational information and vocational guidance services.

It is the purpose of this chapter to identify and describe major aspects of existing guidance services in Montana at both the State and local levels; to consider problems related to the extension or improvement of school guidance services; and to discuss findings and observations, particularly in the light of their implications for vocational-technical education. It is recognized that this approach to an appraisal of guidance services gives heavy emphasis to limited aspects of total guidance program responsibility: vocational guidance, occupational information, and educational programs below the baccalaurate level. This approach is justified on the basis of the major purpose of the total survey and is in no way meant to de-emphasize the importance of the counselor's work with pupils on problems in such areas as collegiate education or personal-social adjustment.

Criteria for Judging the Program of Vocational Guidance and Occupational Information Services

In any survey of vocational guidance and related occupational information services, it is necessary to establish a frame of reference as a basis for examining existing services and for formulating recommendations for the extension or improvement of such services. The following criteria have been identified as a logical frame of reference for the current study as it applies to existing or needed services at the State, local, and area school levels.

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[*] Written principally by John G. Odgers.

A. At the state level

1. The purposes and objectives of the vocational guidance program are clearly defined and understood and form the basis for services rendered.

2. Vocational guidance and occupational information services are recognized and accepted as major and significant segments of a total program of guidance services, which in turn is recognized and accepted as one of the major components of a fully functioning program of pupil personnel services.

3. The services are adequate, efficient, and balanced in terms of (a) direct services to local schools, (b) inservice education and work with professional groups, (c) cooperation with other units of the state department of education, and (d) preparation or collection and dissemination of materials for use in the extension of vocational guidance services in the schools of the state.

4. Standards for local school program content and for counselor qualifications have been established.

5. The staff of the service (professional and supporting) is adequate in number and qualification.

6. Adequate financing is provided for state vocational guidance and occupational information services.

7. The physical facilities for the service are adequate.

8. Research and evaluation services are adequate to provide background and direction for continuing program growth and development.

9. The need for preservice and inservice counselor education is recognized, and adequate provision is made for programs to meet identified needs.

10. Resources for extending vocational guidance services have been identified and utilized.

B. At the local level

1. Local schools throughout the state devote adequate staff time and attention to vocational guidance services.

2. Local guidance services are adequate, efficient, and balanced to meet local needs, with appropriate attention given to the vocational aspects of the guidance program.

3. Local programs meet state standards for program content and staff qualifications.

4. Students are well informed regarding educational and vocational opportunities and requirements.

5. Local counselors feel that existing instructional services at the high school and post-high school levels in the local district, area, and state are adequate to meet the needs of students not planning to go to college.

6. Local counselors feel that adequate guidelines, support, materials, and services for vocational guidance are available from or through the efforts of the state department of education.

C. At the area school level

1. Area school counselors cooperate with administrators and vocational curriculum specialists in the establishment of criteria for admission to area school programs and in the development of guidelines and informational materials for use by school counselors and others who may be referring graduating seniors or adults to the area school.

2. The area school concept and program of guidance services includes such student personnel services as admissions counseling, housing, financial aids, personal counseling, vocational guidance, and placement.

3. Provision is made for such research and survey activities as predictive studies, follow-up studies, the development of selection procedures, and the preparation of course-related job and labor market information.

Survey Plan and Methodology

Both primary and secondary sources were utilized in collecting information pertinent to this section of the survey. Both facts and opinions (judgments) were obtained. Sources of information included people, publications, and personal observation. Major techniques used were the following:

1. A questionnaire was sent to all identified guidance personnel in Montana public high schools and junior high schools listed in the directory "Montana Guidance Personnel 1967-1968."

2. Questions relating to occupational information and guidance were included in general inquiries to school administrators, vocational teachers, business firms, and special groups throughout the State.

3. Personal conferences were held with professional educators, including school administrators, vocational educators, guidance personnel, and university staff members. Field visitation, in addition to conferences with members of the State Department of Public Instruction, included the Helena Vocational-Technical School and the counselor education staff at Montana State University.

4. Appropriate sections of State publications (handbooks, State plans, policy statements, regulations, and descriptive reports) were studied to secure historical data, comparative figures showing program growth, and policies and regulations currently in effect.

5. The State Vocational Guidance Supervisor and the State Supervisor of Guidance Services prepared memoranda at the writer's request, describing various aspects of the State's program not readily available in published form.

6. Correspondence and descriptive materials were received from sources such as the personnel in the Montana Research Coordinating Unit and an ESEA Title III project director, who supplied data and proposals pertinent to the survey.

7. Through his participation in a State conference on vocational guidance held a few months prior to the survey, the writer had the opportunity to meet many of Montana's school counselors and vocational educators and to share in deliberations concerning problems and plans related to the vocational aspects of guidance in the State.

8. Other members of the Survey Staff made inquiry regarding guidance services, needs, and relationships during their visitations to Montana schools, business, and industry. Observations and suggestions were reported by them to the writer.

Historical Background of Guidance Services in Montana[1]

Prior to 1947, few Montana schools had given organized attention to school guidance services, and no State Department of Public Instruction staff member had been assigned to this field. A few schools assigned teachers as deans of boys or deans of girls or as class advisers, but their duties were related primarily to discipline, attendance, and sometimes to planning for college.

First State-level attention to guidance services came in 1947-48 with the employment of a full-time Vocational Guidance Supervisor, employed with the help of Vocational Education (George-Barden Act) funds.

According to the Montana Biennial Report of 1948-1950, guidance is defined as

> ...those services designed to give systematic aid to students in making adjustments to various problems they must meet - educational, vocational, health, moral, social, civic, and personal. Guidance may also be defined as those services which function in helping the individual to acquire the knowledges, understandings, attitudes, and appreciations necessary to become objective, self-reliant, and independent in making decisions. It includes six areas: Individual Analysis, Occupational Information, Counseling, Training, Placement, and Follow-up.

Although early guidance efforts at the State level were funded entirely by Vocational Education, it is interesting to note the breadth of the recommended program purpose and content. As will be described in more detail in following sections, programs in the State today have a broader base for funding, but services cover essentially the same problem areas.

Until the advent of the National Defense Education Act of 1958 and the availability of Federal funds for guidance under Title V-A of this act, all State-level support for guidance came through Vocational Education funds. The level of support fluctuated widely from year to year (e. g., $4,925 in 1947-48, $10,530 in 1949-50, $3,475 in 1956-57, and $10,003 in 1958-59) due primarily to the fact that funds for guidance services were not budgeted or allotted in advance but were made available, whenever possible, as individual activities or projects were planned and funds requested.

As NDEA funds became available for guidance services in 1959-60, Vocational Education fiscal support of guidance was withdrawn for a period of six years (1959-1965). During this six-year period, NDEA funds for guidance services increased from $52,727 to $81,105. These data are shown in Table 108, which reflects also (a) renewed Vocational Education support of guidance in 1965-66 (under the Vocational Education Act of 1963), (b) support for guidance under Title I of the Elementary and Secondary Education Act of 1965, (c) the number of local programs reimbursed under NDEA, Title V-A, and (d) growth in the number of counselors in Montana schools. It should be noted that the data for reimbursed local programs do not reflect the actual program growth that has taken place in Montana schools. This is due to the fact that school eligibility funds under Montana policies are limited to three years, with a fourth year of eligibility being granted only in exceptional cases.[2] Thus, although 50 schools were reimbursed in 1961-62 and only 38 were reimbursed in 1963-64, schools meeting program standards numbered 75 in 1961-62 and 108 in 1963-64.[3]

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[1] Except for published sources indicated, information for this section was obtained by memoranda from and personal discussion with the State Vocational Guidance Supervisor and his predecesor, who is currently the State Director of Vocational Education. The memoranda included excerpts and data from selected Biennial Reports of the State Department of Public Instruction from 1948 through 1966.

[2] Handbook for Montana Schools; National Defense Education Act - Title V-A, Guidance, Counseling and Testing, May, 1965, pp. 5-6.

TABLE 108

STATE-LEVEL FINANCIAL SUPPORT FOR GUIDANCE IN MONTANA PUBLIC SCHOOLS

School year	Amount from				Total	Number of	
	NDEA (V-A)	Vo-Ed	ESEA (I)	State		Reimbursed local programs[1]	Coun-selors
1958-59	$ NONE[2]	$10,003	$	N	$ 10,003	0	92
1959-60	52,727			O	52,727	32	111
1960-61	59,940			N	59,940	47	132
1961-62	59,269			E	59,269	50	135
1962-63	59,315				59,315	48	156
1963-64	60,451			N	60,451	38	154
1964-65	81,105	22,848		O	81,105	44	193
1965-66	86,200	22,848	a	N	109,048	46	234
1966-67	94,820	47,557	a	E	142,377	38	263
1967-68	93,954	b	70,064		164,018[c]	36	283

Source: Montana's Director of Vocational Education and Montana's Supervisor of Vocational Guidance.

[1] These are the programs reimbursed with NDEA, V-A, funds; since schools receive reimbursement for from three to four years, these figures do not identify the total number of schools meeting minimum program standards.

[2] Montana did not participate in the NDEA, Title V-A program in 1958-59, the first year of the program.

[a] Elementary and Secondary Education Act funds were spent for guidance during 1965-66 and 1966-67; however, records were not established to separate this category of expenditure until 1967-68.

[b] No amount available since Vocational Education funds for guidance are not budgeted or determined in advance.

[c] This amount does not reflect Vocational Education funds which will be spent during 1967-68 (see footnote b); the amount will eventually be increased by an amount, estimated by the Montana Director of Vocational Education, to equal or surpass the 1966-67 Vocational Education expenditure of $47,557.

Expenditures for 1967-68 cannot be computed accurately due to the fact that no specific allotment of Vocational Education funds for guidance is determined in advance of the approval of specific projects. However, estimating that the 1967-68 vocational education expenditures for guidance will at least equal those of 1966-67, over $210,000 will be expended at the State level for guidance services during the current fiscal year from all sources. This money is matched several-fold by local school expenditures.

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[3] From the "1964 Annual Report on Guidance Services," submitted by James W. Fitzpatrick, Supervisor of Guidance Services, Montana State Department of Public Instruction.

Although the source of funds for guidance services throughout the 21-year span of State-level support has fluctuated in accordance with available Federal support programs (George-Barden Act, NDEA, Vocational Education Act of 1963, ESEA), it should be noted that program objectives and purposes have remained consistent and well balanced, not showing such biases as might have been expected. This observation can be confirmed by comparing the 1948 definition with the following statement of "Scope, Objectives, and Activities of Programs at the Local Level," which constitutes Section III of the 1965 Handbook for Montana Schools related to NDEA Title V-A funded programs:

> Guidance and counseling programs which are established, maintained or extended under NDEA Title V-A shall serve (1) to advise students, in public elementary and secondary schools or public junior colleges, regarding courses of study best suited to their ability, aptitudes, and skills; (2) to advise students relative to their decisions as to the type of educational program they should pursue, the vocation they should train for and enter, and the job opportunities in the various fields; and (3) to encourage students with outstanding aptitudes and ability to complete their secondary school education, take the necessary courses for admission to institutions of higher education, and enter such institutions.
>
> Such programs shall provide assistance, appropriate to the educational levels of the students by (1) assessing the abilities, aptitudes, interests and educational needs of each student; (2) developing understandings of educational and career opportunities and requirements; (3) helping students, directly and through their parents and teachers, to achieve educational and career development commensurate with their abilities, aptitudes, interests and opportunities and (4) interpreting student needs for expanded or modified educational activities.
>
> Such programs shall include the following guidance and counseling activities to the extent that they are carried out by utilizing procedures and techniques appropriate to the educational levels of the students and are directed toward the achievement of the foregoing purposes:
>
> 1. collecting, organizing and interpreting such information as may be appropriate to the understanding of the student's abilities, aptitudes, interests and other personal assets and liabilities related to educational readiness and progress and to career planning and development;
> 2. making available to the student and his parents such educational and career information as may be essential for them to understand the educational process and the various educational and career opportunities and requirements related to the choice of an educational program and a career;
> 3. providing individual counseling
>   (a) to help the student and his parents develop a better understanding of the student's educational and occupational strengths and weaknesses;
>
>   (b) to help the student and his parents relate his abilities and aptitudes to educational and career opportunities and requirements;

(c) to help the student, with the assistance of his parents, make appropriate educational plans, including the choice of courses and the choice of an institution of higher education;

(d) to stimulate desires in the student to utilize his abilities in attaining appropriate educational and career goals; and

(e) to provide the student directly or through arrangements with other appropriate resources, with assistance as needed for the development of his aptitudes and the full utilization of his abilities;

4. providing services to encourage and assist students in making educational transitions, such as placement in the next educational level, and in securing appropriate employment during and upon completion of the educational program;

5. providing such group activities as may be necessary to orient students and their parents to the

   (a) school program including its offerings, services, and requirements;

   (b) educational opportunities and requirements at the next level; and

   (c) career opportunities and requirements;

6. providing to teachers and school administrators such assistance and information about individual students or groups of students as may be necessary to enable them to plan and implement curricular and instructional programs and services which will afford students maximum and equal opportunity for educational development, and which will be consistent with the manpower needs of the State and the Nation; and

7. collecting and analyzing such information as may be needed to evaluate the guidance and counseling program and to provide such guidance information as may be available and needed to evaluate the school's program in terms of the educational needs of the students and of the State and the Nation.[4]

State Policy for Occupational Information and Guidance Services at the State Level

Although a number of problems will be shown to exist because of the indefiniteness of Vocational Education funding for guidance and because of the involvement of several sources of funds and program standards, it should be emphasized at the outset of this section that the attitude of State guidance personnel is excellent, their concern is great, and their qualifications are highly satisfactory. The chief deficiencies in regard to State-level occupational information and guidance services are primarily those of inadequacies of written policy, inadequacies of staff size, and lack of State financial support.

The *Montana State Plan for Vocational Education* provides the authority and broad general guidelines for the provision of vocational guidance services at the State and local levels. The general nature of the guidance sections of the *State Plan* is commendable since specificity in the basic document would prohibit program flexibility to meet unanticipated needs.

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[4] *Handbook for Montana Schools*, *op. cit.*, pp. 2-4.

This fact, however, makes the development and publication of specific operating policy urgent as a base for State and local program planning. The following State Plan sections relate to vocational guidance:

1.54 Vocational guidance and counseling personnel

1.54-1 It shall be the duty of the vocational guidance and counseling personnel to provide those guidance and/or counseling services which will supplement the program of vocational instruction. Such supplementation will take the form of supervision, material collection and dissemination and other services deemed necessary.

1.54-2 Vocational guidance and counseling personnel shall meet the qualifications as set forth by the State vocational guidance and counseling staff and will include at least 15 quarter credits of work in guidance and counseling, 6 quarter credits of which must be in the vocational guidance field.[5]

3.0 Ancillary Services and Activities

3.1 Vocational guidance and counseling

3.11 General statement of policy

Vocational education under the State plan will include vocational guidance and counseling personnel and services sufficient to enable the program of instruction to meet and continue to meet the standards and requirements indicated in 2.0.

3.12 State program of vocational guidance and counseling

Vocational guidance and counseling service shall be considered as an integral part of the guidance and counseling service of the State Department of Public Instruction. Professional and clerical staff may be added to the guidance and counseling service as is deemed necessary by the State Superintendent of Public Instruction. An adequate staff having those qualifications and carrying out such duties as are described in 1.5 will be maintained. In addition, they shall be responsible for developing, securing, and distributing occupational information; providing consultative services concerning the vocational aspects of guidance and giving leadership to the promotion and supervision of better vocational guidance and counseling services at the local level. In carrying out these responsibilities, the State Board shall utilize the resources of the Unemployment Compensation Commission of Montana pursuant to the cooperative agreement in Appendix II of this State plan.

3.13 Local program of vocational guidance and counseling

The State vocational guidance and couseling staff shall have supervisory responsibilities toward local educational agencies.

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[5] Montana State Plan for Vocational Education, p. 8.

> Policies and procedures shall be such as are designed to (1) identify and encourage the enrollment of individuals needing vocational education (2) provide the individuals with information necessary for realistic vocational planning (3) assist them while pursuing the plan (4) aid them in vocational placement and (5) conduct follow-up procedures to determine the effectiveness of the vocational instruction in guidance and counseling programs. Periodic appraisals of the effectiveness of the guidance and counseling practices and follow-up procedures at the local educational agencies will be made by the State vocational staff for the purpose of assuring that the occupational counseling needs of the students are being met.[6]

In addition to these provisions of the *Montana State Plan for Vocational Education*, at least five other State-level documents outline program, personnel, and fiscal policies and standards affecting vocational guidance services at the State, local, and counselor-education levels. These are:

1. *Policy Bulletin - Vocational Guidance*. This bulletin summarizes purposes, program standards, and eligibility requirements for local school "reimbursement of 50 per cent of the cost of actual guidance time devoted to vocational education." Although this policy statement is being used as the basis for reimbursing approval local programs, it is not easily interpreted as a basis for planning for staff or programs, it encourages claims for reimbursement for time devoted to "vocational education" without requiring that this be for new or expanded service, and it cannot be accurately administered since a counselor's time cannot be subdivided to show time devoted to "vocational education." The basic purpose of the *Policy Bulletin* is good; the policy and the *Bulletin* need study and clarification.

2. *State Plan for Guidance, Counseling and Testing in Accordance with Title V-A of the National Defense Education Act of 1948, as Amended*. This plan provides standards for the use of Federal funds at the State and local levels for the extension of guidance services (not limited to the vocational aspects of guidance). Table 108 identified Montana expenditures of Federal funds under this program since 1959-60.

3. *Handbook for Montana Schools, National Defense Education Act - Title V-A, Guidance, Counseling and Testing*. This handbook describes the purposes of the act and the procedures for local school participation in the State program under the act. Section III of this handbook has already been quoted in full in this chapter to illustrate "Scope, Objectives, and Activities of Programs at the Local Level" under this program.

4. *Standards for Accreditation of Montana High Schools, Standard III C, Guidance and Counseling*. The accreditation standard for guidance and counseling is as follows:

    > Pupil guidance and counseling services shall be provided.
    >
    > 1. *Counselor Qualifications*
    >
    >   The part-time counselor or full-time counselor shall hold a valid Montana teaching certificate and have at least 15 quarter (10 semester) hours preparation in guidance.

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[6] *Ibid.*, pp. 18-19.

2. Counselor Time

   A minimum equivalent of one full-time counselor for each 500 pupils enrolled shall be provided.

3. Appropriate Space

   A room for guidance and counseling shall be provided in high schools with an enrollment of over 150 pupils.[7]

This statement is minimal, contains no program standards, and serves the single (but important) purpose of recognizing guidance and counseling as a basic part of the high school program.

5. Certification of Teachers and School Administrators in Montana, February, 1966. This policy statement will be discussed in more detail later in this chapter.

It is recognized that separate statements of policy and separate program standards and application procedures are needed to conform to requirements and maintain necessary records for participation in various Federally funded programs of guidance, counseling, and testing. However, there is a need for careful coordination in the preparation of program standards and in the administration of programs to avoid confusion, prevent overlapping, and assure maximum service. Any clarification and expansion of the existing Policy Bulletin - Vocational Guidance should clarify program standards, criteria, reimbursement policies, and application procedures and should be coordinated with (or show relationships to) funding and financial assistance available through other Federal assistance programs. No State funds are currently being expended for guidance services at either the State or local level.

The State Staff and Its Activities

The State staff in vocational guidance is limited to one half-time professional staff member and one half-time clerical assistant. The only other State staff time devoted to guidance services is in relation to the NDEA, Title V-A program and consists of one full-time professional staff member and one half-time clerical assistant. Table 109 shows the State-level professional and supporting staff, by source of funding since 1958-59, the first year of operation of the NDEA program. The Supervisor of Vocational Guidance and the Supervisor of Guidance Services, although reporting to different higher echelon staff members, share an office (together with other supervisory and supporting personnel) and work together closely on various projects. As will be noted later in this chapter the size of both the professional and supporting staff in guidance is inadequate to perform needed developmental, consultative, and coordinative tasks which should be the responsibility of the State Department of Public Instruction. Any expansion of staff will necessitate the provision of more adequate housing arrangements. Need for increased State staff will become acute as new vocational and technical education programs develop in the State.

It should be noted that subsequent discussion and analysis of program and problems will be limited in so far as possible to the occupational information and guidance services provided in the vocational education program.

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[7] Standards for the Accreditation of Montana High Schools, Revised by the State Board of Education, September, 1960, p. 10. of State Department of Public Instruction publication by this title dated June, 1964.

TABLE 109

MONTANA STATE STAFF FOR GUIDANCE, 1967-68

School year	Professional staff*			Supporting staff*		
	NDEA	Vo-Ed	State funded	NDEA	Vo-Ed	State funded
1958-59	1		NONE	1		NONE
1959-60	1			1		
1960-61	1			1		
1961-62	1			1		
1962-63	1			1		
1963-64	1		NONE	1		NONE
1964-65	1			1		
1965-66	1			1		
1966-67	1	.5		.5	.5	
1967-68	1	.5		.5	.5	

Source: Montana's Director of Vocational Education and Montana's Supervisor of Vocational Guidance.

* Shown by full-time equivalent numbers.

Since Vocational Education financial support of vocational guidance was only recently reinstated (1965-66) and the present half-time supervisory position was created the following year, it is not possible to present a long list of recent accomplishments. Major recent activities have included the development and administration of policy and procedures for reimbursing local schools for vocational guidance services; co-sponsoring of a Statewide Vocational Guidance Seminar in April, 1967; conducting local and area inservice seminars; maintaining a library of occupational information and guidance publications for use by counselors, teachers, and administrators; providing consulting service to schools and counselor education institutions; and contributing to the State guidance newsletter. Little has been done by way of the publication of occupational information or guidance materials since it is impossible for a half-time professional staff member to handle essential administrative and supervisory duties and still find time for the preparation of publications.

Needed additional activities or services at the State level, which can be provided only by the expansion of both professional and supporting staff, include preparation and publication of handbooks and other vocational guidance aids for local school counselors, planning and coordination of vocational guidance summer seminars for school counselors, conducting studies and collecting information important to the ongoing program, collecting or cooperating in the preparation of informational materials covering occupational and labor market information, providing training opportunities, and the use of nonschool resources for occupational information and vocational guidance. Additional State-level activities related to counselor education and certification are discussed in another section of this chapter.

Funds for Vocational Guidance

As indicated in Table 108, there is no record of Vocational Education funds having been spent for guidance services for the six-year period 1959-60 through 1964-65. In 1965-66, $22, 848 was expended for the reimbursement of local school programs of vocational guidance although none was spent for State-level services. In 1966-67, $31, 546 was spent for local program reimbursement and an additional $16, 011 for State administration and supervisory services, including the underwriting of a State vocational guidance seminar.

No State funds are allocated for guidance, either at the State level or for local program reimbursement, although Federal funds available through the National Defense Education Act and the Elementary and Secondary Education Act are utilized for guidance services to the extent indicated in Table 108.

The problem of financing vocational guidance and occupational information services in Montana is complicated by the fact that no annual budget or monthly or quarterly allotment schedule is planned in advance to permit advance program planning. As State-level projects or services are conceived, each is considered and approved if money is available in the Vocational Education budget to cover it. Thus, in effect, guidance has no money of its own; any money spent may be considered as money which would otherwise have been available for other vocational education activities or services. This is not good fiscal policy; it makes program planning difficult at the State level and impossible at the local level, and it leaves the guidance program at the mercy of other demands on available funds.

The rapid growth of local interest and local program development is increasing the demand for financial assistance beyond that which can be provided through available Federal sources. This problem will be further aggravated as any area or regional school program is initiated since a total pupil personnel program will need to be initiated and funded in area schools.

Relationships of the Vocational Guidance Program with Other Phases of Education and Government at the State Level

Evidence of cooperative efforts involving both other services in the Department of Public Instruction and other units of State government is present beyond what might be expected from a half-time professional staff member. Need for additional cooperative projects has also been identified by both the Vocational Guidance Supervisor and State supervisory and survey personnel in other areas.

Evidence of ongoing cooperative efforts is implicit in the following excerpts from item 10 b. "Vocational guidance programs and services" of the *Annual Descriptive Report of Program Activities for Vocational Education, Fiscal Year 1967*:

> Business Education and Distributive Education: Regular visitations were made to guidance departments of schools. Career information was presented to school counselors.
>
> Home Economics Education: The state staff continued to work with guidance counselors at the local and state level. At the local level, discussion centered around career possibilities in home economics and scheduling for different kinds of programs, wage earning as well as homemaking.
>
> Bulletin board exhibits were set up at the Vocational Guidance Seminar in Great Falls in April. The audiovisual staff and the home economics staff continued to work cooperatively in previewing and evaluating films for the State Audio Visual Library.

The above mentioned Vocational Guidance Seminar was sponsored in cooperation with the Research Coordinating Unit, which also cooperated in "A Guidance Project to Investigate Characteristics, Background, and Job Experiences of Successful and Unsuccessful Entry Workers in Three Selected Industries." This project, co-sponsored with the University of Montana under a U. S. Office of Education grant, has produced information valuable to guidance workers and vocational educators concerning entry workers in Montana's mining, lumbering, and construction industries.

Other cooperative activities of the Vocational Guidance Supervisor have involved the State Office of Economic Opportunity, the State Employment Service, and the State's counselor education institutions.

Vocational guidance services that will need further attention as area or regional post-high school vocational and technical education centers are established include the development of admissions criteria and procedures, housing services, placement services, and follow-up and research services.

General State-Level Problems and Plans Related to Vocational Guidance

The problems affecting the provision of adequate State-level vocational guidance and occupational information can be listed in major categories: (a) the need for clarification of standards and policies, (b) the need for State financial support, and (c) the need for additional professional and supporting personnel. A fourth category, worthy of administrative consideration, is the need for administratively coordinating all pupil personnel services at the State level. The following paragraphs summarize the basic needs related to these problem areas.

The guidance standards in "Standards for Accreditation of Montana High Schools" adopted by the State Board of Education in 1960 fail to provide adequate guidelines to school administrators for the development of guidance services.

No State funds are earmarked or expended for guidance services. State funds are needed to supplement Federal funds (Vocational Education, NDEA, and ESEA) in order to strengthen existing State services and to extend such services to the elementary school level. Adequate occupational information and vocational guidance services cannot be planned and provided under the present "no advance budget" approach. The rapid growth of local interest and local program development is increasing the demand for State-level assistance beyond that which present funding and staff can provide.

There is a national trend toward the coordination of all pupil services in state departments of education, including guidance services, psychological services, school social work (or visiting teacher) services, child accounting, attendance, health, and, in some cases, special education services. Such coordination does not yet exist at the State level in Montana although existing guidance staff members work closely together. Coordination of the above listed guidance and pupil personnel services is feasible and can be accomplished without jeopardizing the availability of vocational education or other Federal funds for specific uses within a coordinated program.

Vocational Guidance Services at the Local Level

It should be noted that in any discussion of vocational guidance personnel or services at the local level, it is impossible to separate the vocational aspects of the guidance program from the total guidance program. Thus data reported in this section, unless otherwise identified, refer to total guidance services.

According to a preliminary listing of Montana school personnel assigned time for guidance during the 1967-68 school year, 229 different schools assign guidance time to approximately 350 different individuals. The figure of 350 is a close approximation since 363 persons are reported but 24 schools indicate that they share their counselor with another school. Table 110 summarizes local school personnel assigned time for guidance. Analysis of information contained in the directory shows that over one-fourth of the counselors in the public high school category and one-fifth of all reported school counselors are part-time counselors whose major responsibility is school administration. While recognizing that it may not be feasible to employ full-time counselors in extremely small schools, consideration should be given to combining the guidance responsibilities of a part-time counselor with some assignment other than school administration as this creates two problems: (a) the guidance assignment is usually given a priority secondary to administration and (b) it is difficult for a person who must handle administrative and disciplinary decisions to establish adequate counseling relationships with individual students who are subject to his administrative and disciplinary decisions.

TABLE 110

LOCAL SCHOOL PERSONNEL ASSIGNED TIME FOR GUIDANCE, 1967-68

Type of school	Number			School administrator serving as counselor	
	Schools assigning guidance time	Persons assigned guidance time	Schools sharing counselor	Number	Per cent of total
Public high schools	157	215	21	55	26
County high schools	16	32	--	4	12
Junior high schools	24	60	1	8	13
Elementary schools	14	17	2	1	6
Private high schools	16	36	--	3	8
Custodial or Federal high schools	2	3	--	2	67
Total	229	363	24	73	20

Source: "Montana Guidance Personnel, 1967-68," preliminary list compiled from 1967-68 Fall Reports, Montana State Department of Public Instruction, November, 1967, 16 pp.

In order to gather information concerning local guidance programs and also counselor opinion, a survey questionnaire was sent to 263 Montana counselors, which was the number of counselors in public high schools on the list which was available in October, 1967. A total of 195 questionnaires were returned to the Survey Office although 12 were unanswered due to person's resignation or to reassignment or to his having been sent two copies because of serving in two schools.

In Table 111 are summarized, by sections of the State, the responses of the 183 counselors in regard to certification, the amount of time spent by the respondent in counseling, and the counselor-pupil ratio in the schools served by these respondents. It may be seen that except for the eastern part of the State, about four-fifths of those serving as counselors are certificated. That part of the State also has fewer persons who are working essentially full time in guidance.

Attitudes and Opinions of School Counselors Toward Problems of Vocational-Technical Education and Guidance

Montana school counselors are particularly concerned about the need for vocational education at the high school level and for post-high school vocational-technical education opportunities on some type of area school basis throughout the State. Many of them express frustration at having the responsibility for helping boys and girls make education choices and plans when there really are no satisfactory choices available for many. They feel that many guidance problems are related to curriculum inadequacies and that many students "stick it out" through high school in the hope of getting appropriate training later.

TABLE 111

RESPONSES OF MONTANA COUNSELORS (1967-68) REGARDING CERTIFICATION, TIME SPENT IN COUNSELING, AND COUNSELOR-PUPIL RATIO

Item	Per cent of respondents					
	Eastern*	North-central	South-central	North-western	South-western	Total
Has Montana endorsement (certification) in guidance and counseling	47	86	80	83	80	76
Time spent in counseling:						
More than 90 per cent	28	49	40	40	57	43
51-90 per cent	9	12	19	28	14	17
31-50 per cent	38	15	12	9	21	18
No more than 30 per cent	25	24	29	23	8	22
Counselor-pupil ratio is 1 to 350 or fewer	74	72	54	45	63	62

Source: SCHOOL SURVEY SERVICE questionnaires.

* The five geographic sections do not coincide exactly with the five areas recommended in Chapter 8.

Only about one counselor in eight believes that the citizens of the community think that the school is meeting the vocational education needs of the pupils "to a great extent." An interesting comparison is that counselor responses indicate that only about one-eighth of the counselors themselves believe that the needs of the non-college bound pupils are being well met.

The responses of these Montana counselors to three questions dealing with vocational-technical education offerings are summarized in Table 112. Approximately one-half of the respondents in the western parts of the State indicate that these offerings are inadequate at the high school level, with the proportions being higher for the three other sections of the State. Appreciably more of each of the groups indicate inadequacy of vocational-technical education at the post-high school level. The differences among respondents from the five sections of the State are not so pronounced in the second question, with the large majority of all five regions indicating that public education should provide preparation for job entry for non-college bound at both levels.

Table 113 shows in summary form certain appraisals by the counselors. From the data there, it may be seen that although two-thirds of them rate their school programs as "very effective" in providing a good foundation for college-bound students, very few make a similar evaluation for effectiveness in "educating young people for adult living" (18 per cent) or for "preparing students for beginning employment" (5 per cent). About one counselor in eight feels that his school provides very extensive information to students concerning the occupational patterns of the county of residence, the State, or the nation. These counselor reactions have definite implications concerning the need for increased State-level occupational information and vocational guidance services.

Counselors also registered concern over the attitudes of parents and pupils toward vocational education. Over 80 per cent of the counselors indicated a belief that courses such as industrial arts and home economics are held in less esteem by these groups than are college preparatory courses.

TABLE 112

RESPONSES OF MONTANA COUNSELORS (1967-68) REGARDING ADEQUACY OF PRESENT VOCATIONAL-TECHNICAL EDUCATION PROGRAMS AND THE LEVEL AT WHICH THIS TYPE OF EDUCATION SHOULD BE OFFERED

Response	Per cent of respondents					
	Eastern	North-central	South-central	South-western	North-western	Total
Offerings for vocational-technical education in his section of the State are inadequate:						
(a) at the high school level	78	77	79	52	53	68
(b) at the post-high school level	94	88	91	67	59	81
Public education should prepare youth, not planning to attend college, for entrance into jobs such as agriculture, sales, office, skilled, and technical employment:						
(a) at the high school level only	13	14	6	8	10	10
(b) at the post-high school level only	18	21	15	11	16	16
(c) at both levels	69	65	79	81	74	74
Post-secondary vocational-technical schools in Montana should be:						
(a) commuting schools only	6	21	18	23	26	19
(b) also resident schools	94	79	82	87	74	81

Source: SCHOOL SURVEY SERVICE questionnaires.

Counselors in general expressed a need in Montana for training in skilled and technical occupations. Based on a three-point scale (very much, some, or little), counselors rated 27 skilled occupations and 20 technical occupations as needing training programs. Training for each of these 47 occupations was rated as "very much" needed by at least one-fourth of the counselors responding to the questionnaire.

Significant Aspects of Local Guidance Programs

Almost all counselors reported that the local guidance program makes at least some provision for individual counseling concerning course selection and career planning, but only 43 per cent of the schools provide group guidance programs on these topics. No specific grade level for such counseling or group guidance services could be identified from questionnaire responses. Virtually all counselors reported that college preparatory students can fit such courses as agriculture, typing, home economics, and industrial arts into their high school course schedules, and almost all indicated that college preparatory students do take such courses. Although such a pattern is logical with respect to the availability of personal

TABLE 113

OPINIONS OF MONTANA'S COUNSELORS (1967-68) REGARDING THE EFFECTIVENESS OF CERTAIN ASPECTS OF THEIR SCHOOLS

Opinion concerning	Per cent of respondents					
	Eastern	North-central	South-central	South-western	North-western	Total
Effectiveness of respondent's school in:						
(a) educating young people for adult living						
Very	19	13	18	12	26	18
Average	62	76	73	85	65	72
Little	19	11	9	3	9	10
(b) providing a good foundation for students who wish to go to college						
Very	64	70	61	76	63	66
Average	33	25	37	24	37	32
Little	3	5	2	0	0	2
(c) preparing students for beginning employment						
Very	9	0	2	6	11	5
Average	39	46	48	53	43	46
Little	52	54	50	41	46	49
Extent to which respondent's school is informing students regarding the occupational patterns of the county of residence, of Montana, and of the nation						
To a great extent	12	9	9	9	20	12
To some extent	82	65	87	82	69	77
Not at all	6	26	4	9	11	11
Extent to which in the respondent's school industrial arts and home economics are held in less esteem than college preparatory courses						
To a great extent	27	37	27	22	18	26
To some extent	49	54	50	59	79	58
Not at all	24	9	23	19	3	16

Source: SCHOOL SURVEY SERVICE questionnaires.

typing and general home economics and industrial arts courses, this situation may reflect a lack of adequate admissions and program standards for vocational courses or a lack of communication between vocational teacher and counselor since generally the organization of a vocational course, whether shop or cooperative and related instruction, will not permit concurrent completion of a full college preparatory course (although admission to a State institution may still be routine).

Two-thirds of the counselors reported serious attempts to involve parents in the guidance program related to high school course selection, and about one-half of these reported participation by 60 per cent or more parents in such activities as scheduled individual conferences, group programs, reviewing and signing course choice forms, etc. Only about 50 per cent of the counselors reported similar efforts to involve parents in career planning activities, and only one counselor in five reports a high level of success. Half of the counselors reporting such activities indicated that fewer than 50 per cent of the parents participate.

When asked concerning financial assistance provided through the State Department of Public Instruction in support of local guidance services, over 70 per cent of the counselors reported either (a) that their school does not receive such assistance or (b) that they do not know of such aid. Fewer than 10 per cent reported that their salaries are paid in part by Vocational Education funds; approximately 20 per cent reported support under NDEA, Title V-A; and fewer than 20 per cent reported support under ESEA, Titles I or III. The fact that some counselors reported program support by more than one Federal program accounts for the above figures totaling approximately 120 per cent. No State funds are provided specifically for local guidance services.

The fact that there is relatively little use of Vocational Education funds and an apparent lack of understanding concerning their possible use is related in part to a lack of clear-cut State-level policy with respect to funds available and regulations covering eligibility for them. State reimbursement policy states that "school districts offering approved vocational education programs may be eligible for 50 per cent of the cost of actual guidance time devoted to vocational education." This policy statement fails to provide any safeguard against overlap of reimbursement with programs supported with other funds. It provides no guarantees that Vocational Education funds will be used only for new or expanded activities, thus ensuring program growth. It should be noted, however, that State policy regarding local vocational guidance activities is sound in stating that "The vocational guidance and counseling service should be an integral part of the total counseling department."[8] It is this important point of view which makes it necessary, however, to include policy provisions to prevent overlap in funding and to limit use of Vocational Education funds to new or expanded program activities.

There is a definite desire on the part of Montana school counselors to improve their knowledge and competencies with respect to the vocational aspects of guidance and to secure up-to-date information and materials pertinent to their vocational guidance responsibilities. Over two-thirds (68 per cent) of the responding counselors indicated an interest in summer employment in an area business or industry to help them gain additional insight into jobs now held by new entrants into the Montana labor market. It is interesting to note that almost 80 per cent (11 of 14) of a small sample of key Montana employers indicated, through Survey Staff interviews, interest in employing school counselors during summer months if asked to do so as part of a planned program.

One of the major problems related to the provision of adequate occupational information and guidance programs is that of providing adequate preservice and inservice training. Although this will be discussed in more detail in a subsequent section, it should be noted here that local guidance personnel in Montana want help and appear sincere in wanting to increase both their time and their skills related to vocational guidance. Demand for local seminars and participation in them have been high; attendance at regional administrative meetings and State conferences on vocational guidance has been excellent; and at least one attempt is being made to establish mobile vocational guidance services (in rural northcentral Montana) to provide vocational guidance services on a scheduled basis and also to provide supervisory and inservice education services to teacher-counselors in small schools.

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[8] Policy Bulletin - Vocational Guidance, p. 1.

Vocational Guidance at the Area Vocational School Level in Montana

Vocational Education funds are currently being used to support guidance services in the area vocational schools at Helena and Missoula. However, existing services are limited due to staff size and lack of clear-cut policy regarding the nature or extent of services ascribed to the guidance program. This situation in no way reflects on the competencies of incumbent guidance personnel in the two area schools. Rather it reflects the newness of this program and the importance of advance planning to meet guidance and pupil personnel needs as the area or regional vocational-technical school system expands.

As new area or regional vocational-technical programs develop, State and area school guidance personnel should become involved in (a) defining the scope and nature of the area school guidance (pupil personnel) programs; (b) determining appropriate guidance, course selection, and enrollment or referral procedures to be used by local schools referring students and graduates or other adults to available training programs; (c) determining needs and developing information needed for the educational and vocational guidance of potential students and those in attendance; (d) the development of selection standards and techniques for specific courses; and (e) the development and initiation of such appropriate other personnel programs as housing services, student employment and financial aids, and placement.

Counselor Preparation of Personnel for Vocational Guidance

Four institutions of higher education in Montana offer graduate degree work in guidance. The University of Montana, Montana State University, and Western Montana College have programs approved for the preparation of secondary school counselors, and Eastern Montana College has a program approved for the preparation of elementary school counselors. Although Northern Montana College has been approved by the State Board of Vocational Education for the training of vocational counselors, no program has been initiated since the College does not offer a Master's degree. Although the writer did not have the opportunity to visit Northern Montana College, he strongly urges further examination of the Statewide counselor education program before any new program is initiated at Northern. This is based on the following reasoning and in no way reflects on the interests or staff competencies of anyone involved:

1. The vocational aspects of guidance are but one important part of a total guidance program.

2. Preservice education in the vocational aspects of guidance should not be established in any training institution separate from a full counselor education program.

3. Before an additional counselor education program is established, there is need for a thorough Statewide study of counselor supply and demand to ensure that such an added State investment is justified.

In addition to this specific counselor education problem, there is need for a general evaluation of counselor education course offerings in the State to ensure appropriate balance among course areas, including practicum experiences. Such a study could profitably be coordinated with the study and revision of counselor certification requirements in the State.

Without exception, the university professional educators (one dean of education and three counselor educators) contacted by the writer indicated a sincere interest in the revision of counselor certification standards and the provision of more adequate guidelines to counselor education institutions. Such revisions should, of course, be developed in close cooperation with the training institutions as well as with State and local education authorities.

Montana certification requirements for guidance and counseling workers are contained in their entirety in two sentences which also cover certification for two other areas as indicated by the paragraph beginning: "Special Education, Guidance and Counseling or Library Endorsements are granted on the Class 1, Class 2, or Class 5 teaching certificates of applicants who have completed college approved programs in these areas. Such programs must include at least 30 quarter credits (20 semester credits) and the recommendation of the appropriate college official is required."[9] This statement includes no requirements for graduate-level training, no specific course areas or competencies, nothing about supervised experience, nor any prerequisite teaching or other work experience. In essence, it leaves the establishment and enforcement of minimum training standards entirely to the training institutions, with no guidelines to ensure comparable training pattern in the several different institutions of the State. In contrast, as shown in Table 114, most Western states require a Master's degree, teaching experience, and at least 21 semester hours of graduate credit in prescribed professional course areas.

TABLE 114

CURRENT CERTIFICATION REQUIREMENTS FOR SCHOOL COUNSELORS IN THE 11 WESTERN STATES

State	Master's degree	Years of experience		Course areas prescribed	Course hours in field of counseling	
		Teaching	Other		Number	Level
Arizona	No	3	2	Yes	30	graduate
California	Yes	*		Yes	60	graduate
Colorado	Yes	2	1	Yes	30	graduate
Idaho	Yes	2		Yes	6	undergraduate
					12	graduate
MONTANA	No	None		No	20	(not specified)
Nevada	No	1	1	Yes	6	undergraduate
					6	graduate
New Mexico	Yes	1		Yes	3	undergraduate
					21	graduate
Oregon	No	2		Yes	24	graduate
Utah	Yes	2		Yes	36	graduate
Washington	Yes	1		Yes	**	graduate
Wyoming	Yes	2		No	**	graduate

Source: U. S. Office of Education, Certification Requirements for School Pupil Personnel Workers, 1967.

* California permits substitution of teaching experience for up to 30 hours of graduate course work in guidance, provided other graduate work is taken.

** As required for the Master's degree.

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[9] Certification of Teachers and School Administrators in Montana, February, 1966, Fourth Edition, p. 11.

In addition to the need for early attention to the establishment of higher counselor certification standards and evaluating existing perservice counselor education programs to ensure breadth and balance, early attention needs to be given to the expansion of more formalized inservice education programs, particularly in areas related to the vocational aspects of guidance. These needs are currently being considered by the State Supervisor of Vocational Guidance in cooperation with other State staff members and counselor educators. Under consideration are summer seminars and other intensive inservice training programs (e. g., supervised summer work experience programs) for practising counselors to provide them with new understandings and skills and with information on needs, developments, and trends related to the vocational aspects of the guidance program. These programs can profitably be planned as a cooperative venture involving the State staff and counselor educators, with a secondary objective being that of developing new content and resources for preservice counselor education programs.

CHAPTER 7*

MAJOR FINDINGS AND CONCLUSIONS FROM THE SURVEY

The Survey Staff, in the preceding six chapters of its report, has presented its descriptive and evaluative material in connection with the survey. That material, for the most part, serves as a basis for the findings and conclusions contained in Chapter 7. This chapter, then, serves a summarizing and synthesizing function, for it attempts to "boil down" into rather succinct statements the detailed presentations that have preceded it. In preparing this part of the survey report, each member of the Survey Staff often called upon his past professional experience in surveys, research, and other educational involvements as he formulated some of his findings and conclusions. This procedure is implied in Survey Principle 14 in Chapter 1.

A research report, particularly of the survey type, often must point out omissions, deficiencies, and questionable directions in the existing situations. This it *must* do if it is to serve as a guide to subsequent improvement of the given set of situations. The negative overtones inherent in this type of approach, however, sometimes cause the reader, especially if he represents a deeply vested economic, educational, or political interest, to become resentful and resistive - a tendency which is quite understandable when some "outsider" criticizes the reader's state or educational system. But such a reader should remember that a study group *invited* into a survey situation is somewhat analagous to a clinic of medical doctors with a patient who seems to need attention. Just as the doctors observe and examine, analyze and interpret, and diagnose and prescribe in a medical situation, so must a survey staff in any educational survey situation. The Survey Staff for the Statewide survey of Montana has tried to do this carefully, objectively, and (it hopes) helpfully within the limits of time and budget set by the State Board of Education.

The major findings and conclusions which follow are presented in the same general order as the material in Chapters 1 through 6.

The Survey Setting

1. There is much interest in Montana regarding vocational-technical education as evidenced by (a) the Legislative Assembly's 1967 authorization of a study, (b) the action of the State Board of Education in contracting with an out-of-state independent professional organization to conduct such a study, (c) the activities of a number of local Montana school districts in seeking "area" designation for vocational-technical education, (d) the number of workshops and conferences sponsored by various State and local groups to study and/or discuss vocational-technical education, and (e) editorials and news items on vocational-technical education appearing in the various news media of the State.

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*Prepared by the 10 members of the Survey Staff. The contents of Chapter 7 differ in several respects from the material in *Part 1* of the *Preliminary Report of the Survey Staff*, copies of which were mailed to members of the State Board of Education on February 1, 1968.

2. Progress is being made toward improved vocational-technical education opportunities, but the progress appears to be relatively slow and characterized by some lack of clarity as to major directions and especially as regards the channeling of efforts institutionally.

3. The problem of improving vocational-technical education in Montana is made more difficult by a number of factors; for example, sparsity of population, the long travel distances within the State, the terrain in the western one-third of the State, some occasional extremes in winter weather, the generally low industrial level of the State, and its apparent lack of appeal for industry.

4. The difficulty of the problem of improving vocational-technical education in Montana in no way minimizes its importance; it simply creates a greater challenge to Montana's educational, economic, and political leadership.

5. The level of sophistication among both lay and professional persons in Montana regarding vocational and technical education seems to be somewhat lower than found in many other states.

6. The turnover in the State professional staff for vocational-technical education, especially at the Director level, seems to militate against stability of operation and needed improvement of program.

7. Educators in the field as well as some of the State vocational staff appear to sense the need for specific written statements of policy, criteria, guidelines, etc. as regards vocational-technical education in general and its various services in particular.

8. The type and size of the State organization for vocational-technical education are deemed by the Survey Staff as not being highly conducive to program growth and improvement; in fact, it may be resulting in a kind of "professional malnutrition."

9. Provision of post-secondary programs appears to be getting involved in too many different types of institution (junior colleges, community college, State colleges, local high schools, and area vocational schools), a situation which may result in undue competition for money, equipment, and students; unnecessary duplication of offerings; small enrollments at high unit costs; and failure to make optimum use of expensive shop and laboratory equipment.

10. The State Board of Education has already received more applications (13) for area school designation than the State population, student enrollment, finances, or employment needs would appear to justify now or in the near future. Furthermore, the existing type of Montana's "area" vocational school is not the best solution to the problem of vocational-technical education in the State.

11. Junior and community colleges appear to have had little impact on vocational-technical education; their chief concern has been (and appears still to be) on "transfer" programs, or the first two years of a four-year baccalaureate program.

12. Generally speaking, two-year programs in basically four-year institutions have historically had an uphill battle in many respects, a very important one of which has been to be able to continue as TWO-year programs.

13. Montana, in terms of its population to be served, appears to have more than an adequate number of public four-year degree granting institutions, none of which is large; and these institutions are relatively well located to serve the State's population.

14. There is need for greater clarification in writing of respective roles in a variety of regards: institutions, personnel, boards, etc.; and there appears to be a special need for written job descriptions at the State level.

15. The existence in Montana of small high schools and other district organization problems is a deterrent to improving vocational-technical programs at the high school level.

16. The population of Montana is too sparse to hope for an adequate "community" system of post-secondary programs of vocational-technical education and points to the necessity for keeping the number of post-secondary centers to a very small minimum for the immediate future.

17. Some of the points of view and unimplemented recommendations of the Peabody Report (1958) regarding the State Board of Education and the State Department of Public Instruction still seem quite relevant to the educational situation in Montana, including vocational-technical education.

18. The State should accept more fully its historical responsibility for educational leadership and not stymie progress by an undue regard for the "sanctity" of the local school district, which, in reality, is a creature of State government.

19. Teacher certification requirements for vocational-technical teachers should be set forth with greater specificity in the Certification Handbook.

20. There is a real question of whether a single board of education can serve well the three major functions of (a) higher education, (b) public education, and (c) vocational, technical, and adult education, for there is a natural tendency for a group serving these three functions to spend more time on higher education than on the two other functions.

21. The people of Montana seem to have an understandable pride, a genuinely warm friendliness, and a sincere attachment to "the Big Sky Country," yet migration figures show a net out-migration in recent decades, a situation apparently reflecting employment conditions.

22. The contributions of the Vocational Advisory Council to the program of vocational-technical education appear to be quite minimal. The reasons for this situation may, in some measure, be outside the control of the Council.

23. The work of the Montana Research Coordinating Unit and its reporting procedures seem not to be as closely related to the State staff for vocational-technical education as they should be.

24. There is a need in the elementary schools, beginning in the kindergarten, for an increased emphasis on exploratory experiences and opportunities in the realm of manipulative skills, starting with large muscle use and development in kindergarten and the lower primary grades. As the child progresses into the intermediate and upper elementary school grades, there should gradually be an increased use of the smaller muscles through manipulative experiences in art, crafts, music, writing, and play (physical education).

25. There were numerous instances found by the Survey Staff in Montana's educational effort which indicate a possibly harmful degree of confusion, lack of communication, and laggardness which reflect symptomatically the need for remediation.

26. The educational problems which Montana faces seem not to be attributable to rapid economic, industrial, or population growth.

27. The population of Montana has shown a gradual increase for the past three decades, population estimates since 1960 indicate continuing small growth, and population projections indicate continued, but relatively slow, growth for the future.

28. Approximately one-half of the counties of the State are "rural" by census designation, but there is a slow movement toward urbanization.

29. The census of 1960 indicates only nine cities in Montana over 10,000 in population, and the largest of these had only 55,357 people.

30. In 1950, 40 per cent of the State's population of 25 years of age and older were at least high school graduates; by 1960, almost one-half of this age group had achieved this level of education.

31. Approximately 36,000 of the 1960 population were in the 18-21 year age group - the ages when most students are in colleges or other post-secondary schools. For the projected 1970 population, more than 50,000 young adults are expected to be in this age group.

32. One-third of Montana's 1967-68 high school pupils were in schools in which enrollments were below 300 each.

33. For the 1966-67 school year, 40 per cent of all the graduates from public high schools in the State were from graduating groups of fewer than 100 each.

34. Comparisons of the October, 1967 public school enrollments for Montana with those five years earlier (October, 1962) show a 9 per cent increase for the entire public school system, with greatest increases occurring in grades 11 and 12.

35. In addition to the high schools operated by public school districts, there are 20 other secondary schools which are State accredited; these graduate about one-tenth as many as do the public schools.

36. Montana compares favorably with the other states of the nation in terms of the per cent of ninth grade enrollment represented by the number graduating four years later.

37. Slightly more than one-half of Montana's high school graduates go on to college or some other form of post-secondary education.

38. The total labor force in Montana increased about 30,000 from 1940 to 1960; during the 20-year period, however, the percentage of the male population in the labor force decreased slightly while the percentage of the female population in the labor force increased more than 12 per cent.

39. Even though the number of persons employed in the census grouping of "agriculture, forestry, and fisheries" has declined markedly in the last three decennial periods, in 1960 it still represented the largest group of employed persons, with "retail trade" and "services" being almost as large.

40. Unemployment in Montana has been decreasing, and in 1964 it was estimated to be 4.6 per cent.

41. In 1960, the largest proportions of men in Montana were employed in these occupations: (a) craftsmen, foremen, and kindred workers; (b) farmers and farm managers; and (c) operatives and kindred workers. For the women in the State the three major occupation groups were (a) clerical and kindred; (b) service workers except private household; and (c) professional, technical, and kindred workers.

42. Employment projections for Montana for 1975 show that the largest number will be engaged in government (including Federal, State, and local), with wholesale and retail trade being second and services being third.

43. Total employment in Montana is growing and will continue to grow, but it will do so at rates below the national average. Agriculture employment will continue to decline, but nonagricultural employment will probably expand at a rate high enough to offset the agricultural employment decline and still show a total employment increase.

44. The per cent of return for the questionnaires sent to professional and lay groups in Montana indicates a high level of cooperation and interest in vocational-technical education; moreover, there were no significant differences in the per cents of return for either group in terms of the section of the State in which the respondents live.

45. There were some differences among the several groups contacted in terms of the types of occupations for which preparation programs are needed in Montana. There was, however, rather general agreement from all sections of the State that there is great need for training for preparation for job entry for these types of skilled workers: automobile mechanic, practical nurse, radio-TV serviceman, diesel mechanic, construction electrician, carpenter, and autobody and fender repairmen; and for these types of technicians: medical, X-ray, dental, law enforcement science, and construction engineering.

46. From the Survey Staff interviews with leaders in government, labor, business, and industry, there was evident a need for improved communication between them and educational leaders at both the State and local levels.

47. Leaders in Montana recognize the fact that a considerable number of young adults seek employment outside the State. This fact does not, in their opinion, lessen the responsibility of the State to prepare such persons for successful job entry wherever they may live.

48. The interviews revealed that although very limited use is made of leadership personnel in business, industry, and labor in planning for the improvement of vocational-technical education, there is a desire and a willingness on the part of these groups to be of assistance.

49. Some concern was expressed by those interviewed that most public high schools continue to overemphasize the academic program and that too often the less able students were the ones encouraged to enroll in the vocational programs and hence were not always acceptable to employers.

50. Most industrial, labor, and business leaders stressed that all trade and industrial and technical education should be taken from the high school level and placed in post-high school institutions.

51. The point was emphasized by some employers that high school vocational programs are not always geared to the current needs in business and industry.

52. The interviewees, in many instances, expressed the conclusion that "area" vocational schools do not and can not function effectively under a single local board of school trustees.

53. Those interviewed were in general agreement that a very small number (4-6) of vocational-technical centers serving large geographical areas were needed at the post-secondary level to serve the needs of Montana.

54. Almost without exception the leaders interviewed consider the survey a worth-while effort and expressed appreciation for the opportunity to participate in it.

55. It appears that lay and professional leadership groups of Montana, including the State Board of Education, the State Department of Public Instruction, and the Legislative Assembly may be ready to accelerate their program of improvement in vocational-technical education, even to the extent of making some rather far-reaching changes.

Vocational Education in Agriculture

1. The high school program of vocational agriculture in Montana is a combination of occupationally oriented instruction and prevocational occupational exploration. This mixture of students with differing objectives poses serious problems for curriculum development and implementation.

2. Departments of vocational agriculture are established in 60 of the 173 high schools of the State and are located in 34 of the 56 counties. In a State which is essentially an agricultural state, many youth and adults are being deprived of the opportunity for agricultural education which would be suited to their needs and interests.

3. There are many small high schools in the State without the necessary resources to institute and maintain a comprehensive program of vocational agriculture. Among this number are some high schools with small and ineffective vocational agriculture programs, but there is no evidence of any effort being made between and among the small schools to provide educational services on a cooperative basis.

4. There is need for the State staff in vocational agriculture to study the agricultural situation in the State and to establish an identifiable basis for determining (a) where new departments of vocational agriculture should be established, (b) where existing departments should be discontinued, and (c) where departments could be established through cooperative services.

5. The high school curriculum in vocational agriculture is trying to reflect the need for training in off-farm agricultural occupations, but there is no uniformity in either content or understanding of it. There is little evidence of guidance and direction through State leadership to bring this new curriculum area into focus and proper perspective.

6. Adult education is a weak feature of the Montana vocational agriculture program and generally is not recognized as an integral part of the program.

7. Very little use was being made of advisory councils in planning and carrying on local vocational agriculture programs; only 18 of the 60 departments indicated the use of lay advisory committees, and only four use them regularly.

8. Many Montana school administrators regard the high school vocational agriculture program as "prevocational" or as only the beginning of occupational training for a few of those enrolled. They believe the vocational objective should be reserved for a post-secondary program.

9. There was virtual unanimity of opinion among the high school administrators contacted that there must be "something" beyond high school in the way of pre-employment training for students planning a career in agriculture or its related occupations.

10. The physical facilities for local vocational agriculture programs would generally rate above average; however, the library in most departments showed obsolescence and was lacking in materials relating to off-farm occupations.

11. Most programs in the State utilize conventional means of farm practice as the sole opportunity for applied experience. Very few cooperative part-time or off-farm work experience programs were found throughout the State.

12. There is an apparent de-emphasis on the activities involved in the Future Farmers of America in many departments, and the opportunity for training for agricultural leadership is difficult to identify in a number of schools with programs of vocational agriculture.

13. The selection of many pupils for agriculture classes is not based on the pupil's choice of agriculture as a career but is made because it affords the pupil the only opportunity in the school's program for any form of shop or industrial arts experience.

14. The holding power of the vocational agriculture program is becoming a matter of concern. Only about 10 per cent of the schools claimed that 90 per cent or more of entering agriculture students complete the program, another 10 per cent reported that only 25 per cent complete it, and the mean (average) number completing the program was estimated at 65 per cent.

15. The State supervisory staff for agricultural education is limited to one individual, who must assume the burden of responsibility for all functions of the office. It is apparent that many necessary services must be performed in a very superficial manner, and that the role of leadership is greatly neglected.

16. Many school administrators and vocational agriculture teachers stated that, due to a lack of personnel, State-level supervision has become practically nonexistent from the standpoint of local visitation and on-site assistance.

17. There was an expressed feeling by local school personnel that State supervision has essentially become a regulatory function, and that necessary leadership is no longer being rendered.

18. The administrative structure of the State Department of Public Instruction within which vocational education direction and supervision are supposed to function is a serious deterrent to effective State leadership for vocational education in agriculture.

19. The State Board for Vocational Education, which is also the State Board of Education for the public schools of the State and the Board of Regents for the State University System, has no representation specifically appointed because of qualifications for or special interest in vocational agriculture.

20. There was no apparent evidence that the State Vocational Advisory Council or its agriculture representative has made any contribution to the State program in vocational agriculture.

21. State studies and research of problems, situations, and needs pertaining to the Statewide program of vocational education in agriculture have been very limited, and there could be found very little validity in the bases for curriculum, teaching techniques, instructor time utilization, and other factors relating to the program.

22. Apparently there is a definite lack of coordination and working relationships between the State office of agricultural education and the agricultural business and industry groups and organizations of the State.

23. There appeared to be an excellent relationship between the State Supervisor of Vocational Agriculture and the agricultural education teacher trainers at Montana State University.

24. The preservice training program for teachers of vocational agriculture in Montana is carried on exclusively by the Department of Agricultural Education at Montana State University. The program of teacher training is only partially adequate to prepare teachers for today's agricultural education needs.

25. Teacher education in agriculture has been doing a very commendable job of on-campus and off-campus graduate and undergraduate summer programs. These have not always related, however, to the most urgent and expressed needs of teachers. Off-campus inservice education during the academic year has been extremely limited, and in no way has it met the need for such service.

26. There was no evidence of a teacher training follow-up program in the field in which time is spent with new and old teachers in individual or group meetings for the purpose of evaluating, recommending changes, assisting in overcoming problems and obstacles, and developing an awareness of the emerging needs of vocational agriculture teachers.

27. Promotional activities on the part of State leaders in vocational agriculture were in very little evidence and may account for the lack of understanding about vocational agriculture and the limited number of programs which are established in the State.

28. The general image of vocational agriculture appeared to be very good among most Montana groups and organizations, but apparently this general image has developed without any planned or objective program of public relations.

29. Many people who have supported the traditional program of vocational agriculture are now questioning its value for a specialized, mechanized, and technological kind of agriculture. The "word" about changes in agricultural education is not being spread.

30. A long-range, Statewide, coordinated program of vocational education in agriculture which is designed to meet the needs of all persons who can benefit by it, which is developed with the involvement of broad public representation, which is promoted through the agricultural interests of the State, which is implemented by sympathetic local boards, and which is administered by a qualified and competent State staff would be in harmony with the needs of agricultural education for Montana.

Education in Vocational Home Economics

1. The Montana school administrators and home economics teachers interviewed by the Survey Staff were cooperative, and they evinced interest in home economics education.

2. Adequate leadership for the development of home economics programs in Montana has been provided by the State Supervisor of Home Economics Education in cooperation with the teacher-educators at Montana State University and the University of Montana at Missoula.

3. Publications of the State Office of Vocational Education, such as the program planning bulletin, curriculum guides, and workshop reports, are providing guidelines for teachers and administrators in developing programs for homemaking education, particularly at the secondary school level.

4. Both the administrators and home economics teachers who were interviewed were generous in praise of the consultative and other leadership services provided by the home economics supervisors. The opportunities for inservice education provided by workshops and conferences sponsored by the State staff for home economics education were also praised by the teachers interviewed.

5. Home economics education majors in the teacher training institutions have a balanced program designed to prepare them to teach all areas of homemaking in secondary schools and in adult and post-secondary programs; however, additional emphasis needs to be placed on training teachers for the gainful employment aspect of home economics.

6. Administrators contacted in person stated that their greatest problem in relation to home economics was securing qualified, capable home economics teachers with the kinds of personalities which attracted students to the program.

7. Home economics teacher educators stated that, although substantial numbers of students had been prepared and were preparing to teach home economics, few of these actually reached classrooms in Montana.

8. Few graduate students preparing for a Master's degree in home economics choose to write a thesis; instead, most prefer to write a graduate research paper and take additional credits. As a result, few research studies of the level of a Master's thesis are coming out of Montana State University.

9. Homemaking courses at the secondary school level in Montana serve principally as general or exploratory courses. Very few depth courses for students with special interests are offered.

10. Two gainful employment programs at the secondary school level were in operation in 1967-68 - one in each of the two area vocational schools. These programs train for clothing services and homemaker assistants.

11. Since more women in Montana are married at ages 15-19 than during any other age span, students studying home economics have an early use for instruction preparing them for their roles as wives and mothers.

12. Teachers and administrators interviewed see "preparation for homemaking" as the major purpose of home economics education in their schools although a number are also beginning to take a look at the gainful employment purpose.

13. Vocational homemaking programs on the secondary school level are generally well accepted by Montana high school administrators since most expressed the belief that preparation for the responsibilities of a home and family make a real contribution to the education program of students.

14. Emphasis in the growing adult education program in homemaking was primarily on clothing construction, with only a few courses offered in other areas. Several adult-level gainful employment programs, however, have been initiated to train homemaker assistants.

15. Homemaking departments, in general, appeared to be well equipped; and homemaking teachers interviewed stated that for the most part sufficient funds were available for supplies, books, and reference materials. Lack of space, according to teachers and administrators, is the primary problem.

16. The Montana State Supervisors of Home Economics stated that one of their biggest problems is that of initiating change. Teachers are sometimes reluctant to try something new; this is especially true in regard to gainful employment programs in home economics.

17. Some administrators and teachers stated that home economics served the needs of students who could not achieve satisfaction from the academic program.

18. Through adult homemaking classes in clothing construction some women have developed employable skills.

19. Persons preparing themselves for occupations related to clothing would increase their opportunities for employment if they prepared for a broad cluster of clothing occupations, including retailing, since there is little turnover of clothing alteration workers and dressmakers in retail stores and dry-cleaning establishments.

20. Survey Staff conferences with personnel in employment services, restaurants and hospitals, and some culinary unions, revealed a shortage of food service workers. The greatest shortage appeared to be in cooks although high quality waitresses were also in short supply.

21. In the larger centers of population in Montana, there are shortages of trained child-care workers. Very few day-care centers are available for children of working parents.

22. Most of the training received by new persons employed by motels and hotels as maids is received on the job. Motel managers interviewed said this system was currently satisfactory as there is a low turnover of workers.

23. Returns of questionnaires sent to "key homemakers" indicated that homemakers would be interested in hiring trained people for a variety of home services.

24. Returns of questionnaires sent to nursing home directors indicated that nursing homes are staffed by a number of nonprofessionals whose jobs were related to home economics.

25. Several administrators interviewed stated that they believed that home economics had been somewhat neglected as a part of the vocational program.

26. The great need for area or regional vocational schools and post-secondary programs was indicated by many administrators who stated that students from their schools who desired further vocational training often went to schools in other states in order to get the desired trade or technical training.

27. Although there are no programs in Montana at the post-secondary level designed to train for employment or for homemaking, administrators of area vocational schools and community colleges expressed an interest in including such programs as soon as feasible.

28. There are many small Montana high schools where the need for gainful employment programs is limited because of the lack of opportunities for employment in the community or the surrounding area.

29. Service occupations are one of the fastest growing occupational areas in Montana and contribute significantly to Montana's economy and employment situation. These occupations give promise for training programs at all three levels - secondary, post-secondary, and adult.

30. Community colleges in Montana were not offering any home economics programs to prepare youth or adults for employment. Neither were they offering any programs for adults supplemental to employment.

31. Apparently the values of the program embodied in the Association of Future Homemakers are well recognized by both the administrators and the teachers of home economics in Montana high schools; especially emphasized was the value of developing leadership in the participants.

Distributive Education

1. There are substantial occupational opportunities in Montana in the fields of distribution and marketing; these include small retail store operation; marketing for manufacturing, industries, and wholesaling; and the operation of service industries. The need is particularly great for those who can become unit managers.

2. Most Montana businesses, distributive and service, are small and lack the capability for employment of specialized midmanagers and supervisors. The burden of management decisions and daily operational supervision generally falls directly upon the owner-manager (operator).

3. Since distributive businesses in Montana are typically very small and often managed by the owner-operator, little on-the-job training can be offered other than "coaching."

4. The distributive education program has shown from its inception an instability wherein State staff have changed frequently and enrollments have fluctuated markedly.

5. In 1967-68, distributive education was offered in only 13 high schools and in two post-secondary institutions in Montana. Both the number of schools and the enrollments represent less than 10 per cent of the respective totals in the State.

6. In the schools in the larger cities of Montana a major problem exists in the type of student admitted to the distributive education program: (a) in the junior year (noncooperative), students were placed in the course, not because of even a minimum interest in a career in distribution and marketing but because they "needed a course"; and (b) in the senior year (cooperative programs), one-third to one-half were either not placed in occupational experience training stations or were in positions of questionable direct relationships to career goals.

7. Few of the 13 schools have available for instruction complete distributive education laboratories with up-to-date equipment.

8. In most of the programs visited, coordination time was grossly inadequate in terms of the numbers of students served.

9. High school programs have but one hour of directly related instruction for cooperative students, and some do not have an eleventh grade prerequisite course dealing with marketing and retail distribution. In almost every school the only other business courses available are those in the secretarial-bookkeeping areas.

10. The distributive education program in some schools is in reality a work experience program rather than a vocational education program as distributive educators throughout the nation would define it.

11. There is great need to improve both the quality and quantity of distributive education in the State; additional high school programs are needed in each center of business activity, and in the larger cities double sections of senior cooperative distributive education are needed.

12. There is great need for the development of a Statewide continuing education program for small business management and for the subprofessional specializations.

13. There is among school personnel and local businessmen a lack of understanding of distributive education as a total program: high school, post-high school, and adult; most see only the high school work experience phase and the club contest program.

14. Distributive education is hampered by the emphasis on the academic program for the college bound.

15. In general, school administrators, business education teachers, and guidance counselors have less than an adequate understanding of the goals of distributive education and the inputs (coordination time, student selection, and instructional facilities) which are requisite to achieving vocational outcomes at the secondary school level.

16. The concept of semiprofessional education for midmanagement positions in distribution is not well understood by Montana school administrators, who apparently see post-secondary education as "skill training" for retail selling.

17. There is need to establish in a limited number of population centers post-high school midmanagement curricula of an Associate degree quality, with appropriate opportunity to specialize in various product technologies.

18. Most distributive education teacher-coordinators in the State are well qualified by training and experience and would meet prevailing certification standards throughout the country.

19. In the one State institution designated for distributive teacher education, the undergraduate program is good; but, although graduate courses are offered, there is no Master's degree in Distributive Education.

20. The present and projected enrollments in the distributive teacher education program at Montana State University indicate that they are almost sufficient in number to meet present program needs at both high school and post-high school levels; however, the supply of teachers should at least be doubled if future local program requirements are to be met in the high schools and in the needed post-high school programs.

21. Almost no load time is assigned to the teacher educator in distributive education for teacher education responsibilities other than teaching professional courses on campus.

22. There is special need for the teacher educator to be provided with time on campus for developing instructional materials and conducting research and with time off campus for giving leadership to teachers, through extension courses and inservice meetings, in their efforts at curriculum improvement, development of instructional materials, improvement of instruction, and research.

23. School administrators and teachers indicated a great need from the State Department of Public Instruction and teacher education institutions for service activities such as inservice meetings and conferences for improvement of instruction, consultative assistance with developmental programs, and definitively written guidelines and policies.

24. Since there are no published guidelines or policy statements regarding the operation of local programs of distributive education, the local schools have difficulty in obtaining a clear and consistent picture of what standards are to be met.

25. There is inadequate State staff time available for the development of the distributive education program since the State Supervisor for Distributive Education has been assigned the additional responsibility for office education; moreover, the shared arrangement for office space and secretarial help tends to complicate the situation further.

26. There is great need for the State Department of Public Instruction and the teacher education institution to collaborate on a curriculum research development program designed to demonstrate that valid training for distribution at an entry-job level can be provided in small high schools through the structure of a senior intensive laboratory approach, using projects and simulation activities.

27. The movement known as the Distributive Education Clubs of America is heavily emphasized and is well established in the State; there is need, however, for greater integration of its activities into the instructional program.

28. The State Supervisor has had considerable involvement with DECA at both State and national levels and is commended for this participation and leadership by both business and professional groups.

29. There is a great need in Montana to train small business managers, especially in retail merchandising, with emphasis upon credit, sales promotion, and buying and merchandise control for small stores.

30. Few distributive education programs have functioning advisory committees representing the school, the marketing organizations of the community, and related labor organizations.

31. Adult and continuing education for distribution and marketing is not being accorded the resources necessary to improve the competence of employees and management. No organized program existed on a Statewide basis, and few school districts perceived their responsibility for such a program.

32. The role of local distributive education coordinators as adult educators is not perceived by local administrators, for these coordinators have neither the time nor the assigned responsibility for development, organization, administration, and evaluation of a program of adult and continuing education for distribution and marketing.

33. Distributive education teacher coordinators were most cooperative in providing information about their programs and opinions about the need for improving distributive education in the State and were generally most supportive of the State Supervisor and teacher educator; however, they are frustrated by what they see as a great lack of understanding by counselors and other school personnel of the career preparation goals of distributive education.

34. There was no evidence of cooperative curriculum development and team teaching between distributive education and other vocational programs.

Office and Business Education

1. Employers reported a definite shortage of qualified office workers in Montana, and the semiprofessional occupations in the fields of office and accounting show very great opportunities. Among the needs are for those trained for data processing, executive secretarial work, office management, technical accounting, and office administration.

2. Registration in all business education subjects in Montana high schools totaled 23,020 in 1966-67. Almost one-half the total were in beginning typewriting, general business, and economics, with 10,000 of these in typewriting. Enrollments in second-year sequence subjects and senior laboratory subjects (presumed to be vocational) were about 12 per cent of the total business education enrollments.

3. Montana high schools offer what might be best termed "a cafeteria" program in business education; few required sequences exist which are programmed in terms of the outcomes known to be necessary if occupational competence is to emerge.

4. Enrollment data demonstrate that most of the enrollments, and the use of resources, in business education are in those subjects which are primarily for personal-use outcomes or are prevocational. The number of students completing a vocational sequence is very inadequate in terms of the number of youth who need training and in terms of the manpower demands of the State and the labor markets in surrounding states to which some Montana youth migrate.

5. It is quite evident that office education is in a position wherein the program is hampered by the basic conflict of administrators and counselors with the demand for "academic education" for the college bound on the one hand and the need to provide realistic education for everyday living and employment on the other.

6. It is regrettable that some young men and women in Montana find it necessary to pay high tuition to proprietary (private) schools if they wish semiprofessional training for business while other young people are subsidized for their advanced education at public expense.

7. There is a great need for secondary schools to provide pupils with a general education related to the business world in order that students may learn (a) to understand the free-market economy, (b) to plan and manage their personal finances, and (c) to develop the abilities they need as consumers and economic citizens.

8. There is need, on the part of both school administrators and teachers of business and office education, for a realistic philosophy concerning the general and vocational education goals of business and office education; this is a need apparently for counselors as well.

9. There appears to be an overemphasis upon bookkeeping courses compared to the needs in this occupational areas in the State. First-year bookkeeping enrollments are almost 25 per cent of total business enrollments, which is a questionable emphasis in terms of the use of the content in clerical and stenographic positions.

10. The majority of the business teachers replying to the survey questionnaire stated that a student could devote at least one-fourth of his high school time to occupational preparation for office positions without endangering the general education necessary for life as a functioning adult citizen.

11. About one-half of the business education teachers in the State indicated that a course in general business at the ninth or tenth grade level is fundamental for those who wish occupational preparation in office education or distributive education; yet less than 2 per cent of the high school population of the State was enrolled in such a course in 1966-67.

12. Vocational office programs for stenographic occupations were seen by the responding business teachers to be finishing courses for a select group of students. The emphasis is apparently placed upon increased skill development in shorthand dictation and transcription, and few schools emphasize integrated and simulated office practice activities. The so-called "block" programs were in reality two separate periods which negated the employment of task practice in various office problems.

13. There is a need to promote among teachers and administrators an understanding of the true nature of cooperative office education programs and to establish more cooperative programs with coordination time, career placements, and other requisites of a quality program. In too many instances what is called "cooperative office education" is in reality a "work experience" program.

14. There is a need for a very substantial increase in the number of high school vocational office programs and a much greater emphasis upon training clerical workers.

15. The room layouts observed by the Survey Staff were generally not conducive to vocational office education. Questionnaire responses revealed that there are some lacks in modern equipment for certain business courses; for example, electric typewriters and L-shaped desks.

16. A small high school, one with a 150-300 enrollment, can have a sound office education program as long as:

    (a) it trains for a cluster of office occupations ranging from clerical to clerk-stenographer positions

    (b) it avoids dissipating resources to support a range of courses and specialties from which only a few students will profit

    (c) it sets aside a multiperiod block of time as a senior office laboratory which would provide simulated office learning experiences, integrated task practice, and individualized instruction for small groups; for example, advanced shorthand and transcription practice

17. No Montana high school reported teaching data processing as a separate subject or sequence. Some schools indicated they teach units or topics within other courses which deal at the acquaintance level with unit record systems and keypunch.

18. There is a great need for establishment of post-high school executive secretarial, accounting, and data processing programs in a limited number of major population centers in Montana.

19. Since there are no statements or guidelines as to specific criteria for quality of local programs or teacher requirements, local school personnel have difficulty in determining what standards are to be met and in obtaining assistance as to what programs (curriculum patterns) are deemed most appropriate.

20. There is a decided inadequacy in the number of State staff available to plan, organize, coordinate, and assist with program development in office education since the lone State staff member formerly was solely concerned with distributive education and was assigned the additional responsibility for office education.

21. School administrators and teachers indicated a great need for service activities from the State Department of Public Instruction and teacher education institutions for resources for the improvement of instruction such as planned inservice meetings and conferences for teachers, instructional materials, curriculum guides, consultative assistance with developmental projects, and written guidelines or policies.

22. The Montana University System will be required to increase its annual production of business and office education teachers by at least 50 per cent if positions in present and emerging programs are to be filled with qualified teachers and if present emergency certifications are to be eliminated.

23. A need exists to provide appropriate graduate experiences and directed occupational experiences both on campus and through extension centers which will (a) develop local leadership personnel, (b) provide fully qualified vocational office teachers and teacher-coordinators, and (c) provide qualified adult education directors and instructors.

24. Additional stress in the student teaching program is needed on (a) supervision by teacher educators who are specialists in office education, (b) experience by student teachers in vocational programs, and (c) training of local teachers as on-site teaching supervisors.

25. There is a decided lack of teacher educator time devoted to service activities for office education such as development of instructional materials, consultation with schools on curriculum improvement, research, visitations to improve school instruction, and inservice meetings and extension courses.

26. Teachers responding to the survey questionnaires and participating in survey interviews were most cooperative as were the local directors of vocational education. The many comments indicated their very real concern for improving office education in Montana. On the other hand, they revealed in many ways their very great frustration born of their desire for improvement but stemming from the lack of assistance and service and the lack of information about such things as (a) manpower needs and requirements in the State, (b) State policies and guidelines for action, and (c) the elements of a good program of office education.

27. Business teachers tended to be course oriented rather than program oriented. In general, they did not perceive as imperative the development in post-high school institutions of what can best be termed education for semiprofessional business occupations. Their sights instead were set upon the high school program for entry-level positions.

28. About one-half of the business teachers responding to the survey questionnaire believe that their schools are at least minimally preparing youth for entry-level positions in clerical, bookkeeping, and stenographic fields, and one-third feel that their graduates are well qualified; only one-tenth think the graduates can advance professionally without further training.

29. There is a lack of inservice training, conferences, and workshops for both new and experienced teachers for the professional improvement of instruction and educational programs at local, district, regional, and State levels.

30. Teachers of business and office education, as well as the public, need to be informed regarding community and business changes in order to have cooperation for change rather than being informed after administrators make decisions. One way to achieve this goal is for business teachers to belong to, and participate in, community organizations related to business, such as social-business clubs or local business associations. Apparently few of the business teachers now do this.

31. There is a need in business and office education courses for effective utilization of the resources of local business establishments to supplement and enhance classroom instruction.

32. Few, if any, schools are making annual follow-up studies; few, if any, have functioning advisory committees for office education; and none offers formal placement services for graduates.

33. There is in Montana no functioning youth organization (similar to DECA) which serves as part of the instructional program for high school youth interested in careers in office occupations.

34. There is a need in office education offerings in Montana for improved and expanded adult education offerings, accelerated courses for those who need them, job training programs, and a host of other supportive services. Adult and continuing education for office education programs is, however, not being accorded the resources that are necessary to improve the competence of employees and office managers. Too few school districts seem to perceive their responsibility for adult programs. There appears to be no organized program on a Statewide basis.

35. High school office education coordinators have neither the time nor the assigned responsibility for development, organization, and evaluation of adult programs and continuing education programs for office education.

36. Although four Montana institutions train business education teachers at the undergraduate level, no specific vocational office teacher education program existed at the time of the survey.

Trade and Industrial and Technical Education

1. The staff at the State level for trade and industrial education and for technical education are to be commended for their personal concern, interest, and outlook in their areas of responsibility.

2. The State staff for both trade and industrial and technical education is not large enough to provide effectively for the State's responsibility in these two areas of instruction.

3. The State Supervisor of Technical Education and the State Supervisor of Trade and Industrial Education are in separate organizational units within the vocational education service and are housed in different buildings, making it difficult to coordinate effectively their responsibilities.

4. No research at the State level has been done in the trade and industrial and technical education field for years.

5. Summary data concerning the program of technical education and trade and industrial education are not made available to local school officials and teachers, and no organized plan is apparent at the State level to keep teacher educators informed of the certification of trade and industrial and technical education instructors.

6. There is little evidence of vigorous leadership from the State Supervisor in developing an expanded program of technical education in cooperation with local school officials; the commitment appears largely to be one of routine inspection.

7. There are no job specifications for the positions of State Supervisor of Trade and Industrial Education or the Supervisor of Technical Education other than the limited descriptions found in the State Plan for Vocational Education.

8. The State staff relationships with other agencies were generally good.

9. The State staff is to be commended for its efforts in developing Vocational Industrial Clubs of America (VICA) in several school districts in Montana.

10. Training programs in health occupations as well as in other industrial occupations in which girls and women are employed are vital to the health and welfare of the citizens of Montana and warrant additional attention from the State staff.

11. Selection criteria for teachers and professional certification requirements are vague and ill-defined.

12. Responsibility for teacher education for technical education and trade and industrial education teachers has been assigned to Northern Montana College.

13. No systematic system exists whereby the teacher educators can obtain objective data about the number of teachers employed, their needs in terms of certification requirements, or their needs and interests in relation to professional development.

14. The program of teacher education must be defined clearly in relation to teachers who are completing their occupational preparation as a part of a baccalaureate degree and in relation to teachers who are completing certification requirements who already have baccalaureate degrees.

15. The program for teacher education is too narrow in that provision at the baccalaureate degree level provides only for teachers of automechanics, drafting, and electronics; this is a limiting factor as regards the development of technical education in Montana.

16. Persons at Northern Montana College holding the responsibility for teacher education for trade and industrial and technical education exhibited a wholesome professional attitude and inclination toward their responsibility.

17. Additional personnel are needed in the teacher education program for trade and industrial and technical education teachers in order to provide properly for inservice, or continuing, teacher education and to cope with the vast distances involved.

18. The existence of an advisory committee for technical teacher or trade teacher education was not evident.

19. The teacher education program at Northern Montana College will soon occupy quarters in a new building including at least minimal new equipment; more equipment is needed to provide adequately for the training of teachers.

20. Trade and industrial and technical education instructors are unable to attain a Master's degree in vocational-technical education at Montana institutions of higher education.

21. Instructors of trade and industrial and technical education are well qualified from the standpoint of occupational experience prior to entering teaching.

22. A variety of short-term inservice programs for professional development for technical and trade teachers, provided on a systematic and continuous basis, is imperative. Such programs must be provided over and beyond those required for certification and degrees.

23. Instructors, coordinators, supervisors, and administrators of trade and industrial or technical education generally do not participate in national seminars, clinics, workshops, or conferences which are especially designed for leadership and professional development.

24. One gets the distinct impression that professional personnel are restrained in attempts to provide leadership programs or react in an innovative and creative manner to emerging needs in trade and industrial and technical education.

25. The Dean of Education, Montana State University, expressed an interest in developing a Master's degree program in vocational education.

26. The total program needs to be improved in definition and purpose so that industrial arts, trade and industrial, and technical education can be distinguished clearly; to help achieve this, industrial arts should be continued in the high schools, but trade and industrial and technical programs should be operated only in post-secondary institutions.

27. An overall plan is needed for the development of technical education, with particular emphasis upon allied health areas, paraprofessional occupational areas, and other emerging occupational areas.

28. A Statewide data system is needed to provide a more objective base upon which to plan output of trade and technical education students in relation to occupational demands at State and national levels.

29. In view of the development at Montana State University of a well-defined technology program at the baccalaureate level, other technical education programs should focus upon technician, or equivalent, preparation.

30. With one exception, there appeared to be no programs of placement, follow-up, or follow-through concerning the graduates of trade and industrial or technical education programs.

31. Student selection procedures for trade and industrial and technical education classes in most Montana high schools seemed ineffective.

32. Most schools offering trade and industrial and technical education courses make little use, if any, of representative craft or general advisory committees.

33. Few students enrolled in trade and industrial or technical education classes have had purposeful exploratory and "prevocational" experiences in the occupational areas concerned prior to enrolling in a vocational education class.

34. A substantial number of shop and laboratory facilities could be improved.

35. Most local school districts do not employ a local supervisor of trade and industrial and technical education programs.

36. Many trade and industrial and technical education instructors feel the lack of a source of instructional materials.

37. The majority of high schools visited do not administer vocational aptitude tests before enrolling students in trade and industrial classes.

38. Some schools reported that many of their trade and industrial graduates become apprentices and are given credit on their apprenticeship for their schooling; such action on the part of the schools and the apprenticeship committees is commendable.

39. Most high school administrators and instructors expressed a need for post-high school training in trade and industrial and technical education.

40. Industrial arts and trade and industrial and technical education courses are often offered in the same shop and by the same teacher, a practice which frequently defeats the unique purposes of either or both programs.

41. The industrial arts program in the public schools of Montana is large enough to warrant the employment of a State Supervisor of Industrial Arts, whose activities should be closely coordinated with those of the State Supervisor of Trade and Industrial Education and those of the State Supervisor of Technical Education.

42. There is an apparent lack of equal opportunities for adult industrial education offerings in some school districts. School districts using the adult education tax levy to assist in the support of adult education classes are able to provide a wider variety of offerings than those districts which do not use the tax for adult education.

Vocational Guidance and Occupational Information

1. Fewer than one-half of the approximately 190 Montana school counselors responding to the questionnaire devote full time to guidance.

2. Approximately three-fourths of the respondents reported possession of the Montana endorsement (certification) for guidance and counseling.

3. Counselors reported counselor-pupil ratios ranging from "No more than 1/100" to more than 1/500, with the median ratio falling between 1/300 and 1/350.

4. Over 70 per cent of the counselors reported either (a) that their school does not receive assistance from Vocational Education funds, NDEA funds, or ESEA funds or (b) that they do not know of such assistance.

5. Slightly more than two-thirds of the counselors reporting indicated an interest in summer employment in area business or industry to help gain additional insight into jobs now held by new entrants into the Montana labor market. Approximately 80 per cent of Montana employers questioned concerning summer employment of school counselors indicated an interest in employing them if asked as part of a planned program.

6. Counselors rated 27 skilled occupations and 20 technical occupations as needing training programs; training for these 47 occupations was rated as very much needed by at least one-fourth of the counselors.

7. Virtually all counselors reported that college preparatory students can fit courses such as agriculture, typing, home economics, and industrial arts into their high school scheduled courses, and almost all indicated that college preparatory students do take such courses.

8. More than 80 per cent of the counselors stated a feeling that courses such as industrial arts and home economics are held in less esteem by parents and pupils than are college preparatory courses.

9. Almost all counselors reported that provision is made for individual counseling concerning course selection and career planning; however, no specific grade level for such counseling could be identified from questionnaire responses.

10. Only two out of five counselors reported programs for all pupils to participate in group discussion of course selection and career planning; no grade level pattern could be identified.

11. Three out of five counselors reported serious attempts to encourage parents to participate in the program of course selection, and one-half of the counselors responding indicated that 80 per cent or more of the parents are usually involved in such ways as scheduled individual conferences, group programs, parents' signature on course choice form, etc.

12. Slightly over one-half of the counselors reported serious attempts to encourage parents to participate in their children's career planning activities. In this case, however, only one counselor in five reported a high level of cooperation, and about one-half of the counselors reported participation by fewer than one-half of the parents.

13. Only about one-eighth of the responding counselors stated that the citizens of the community feel that school is meeting the vocational education needs of the pupils "to a great extent."

14. Only about one-eighth of the counselors themselves stated that vocational education needs are well met.

15. Only about one-tenth of the counselors indicated their school was informing students well regarding occupational patterns in their county, Montana, and the nation, although three-fourths felt that this was being done only to some extent.

16. Although two-thirds of the counselors rated their school program as "very effective" in providing a good foundation for students who wish to go to college, only one out of five gave a similar rating to his program for "educating young people for adult living," and only one in 16 felt that his school was "very effective" in preparing students for beginning employment.

17. School counselors were particularly concerned about the need for vocational education at the high school level and for post-high school vocational-technical education opportunities on some type of area basis throughout the State.

18. Although more than 80 per cent of the counselors reported believing that public education, at both the high school and post-high school levels, should prepare youth not planning to attend college for entrance into jobs, two-thirds felt that high school vocational programs are inadequate, and almost four-fifths said the same about post-high school vocational and technical programs.

19. Four out of five school counselors stated that post-secondary vocational technical schools in Montana should provide residence as well as serve commuters.

20. Basic (minimum) Standards for the Accreditation of Montana High Schools, adopted in September, 1960 by the State Board of Education, fail to provide adequate guidelines to school administrators for the development of guidance services.

21. State funds are needed to supplement Federal funds (Vocational Education, NDEA, and ESEA) in order to strengthen existing State guidance services and to extend such services to the elementary school level. A more definite (less haphazard) approach to funding for vocational guidance is needed.

22. The rapid growth of local interest and local program development is increasing the demand for State assistance beyond that which the existing State budget and staff can provide.

23. There is a national trend toward the coordination of guidance services and other pupil personnel services. In Montana such coordination does not yet exist at the State level although existing guidance staff members (one funded through Vocational Education and one through NDEA Title V-A) work closely together and share an office. Coordination of the various guidance and pupil personnel services is feasible without the loss of availability of vocational education funds for appropriate aspects of the program.

24. There is need for further analysis of Montana counselor supply and demand and for coordination among the institutions offering counselor-education programs and the State Department of Public Instruction staff members with guidance supervisory responsibilities in planning to meet identified needs. This could be accomplished, in part at least, by regular meetings of counselor educators and State supervisory staff members in guidance.

25. There is need for a study of counselor education course offerings to ensure appropriate balance among course areas, including practicum experiences. Counselor educators would greatly appreciate more definite certification requirements as a guideline for program planning.

26. There is need for summer seminars and other intensive inservice training programs for practicing counselors in order to provide them with new understandings and skills and with information on needs, developments, and trends related to the vocational aspects of the guidance program. The State Department of Public Instruction and counselor educators might plan such programs as a cooperative venture, with a secondary objective being that of developing new content and resources for preservice counselor education programs.

27. Staff and physical facilities related to State Department guidance services in general, and vocational guidance specifically, are inadequate to provide needed services. This inadequacy is becoming more acute as more emphasis is being given to improved and expanded vocational and technical education, with its accompanying need for increased guidance.

28. As new vocational and technical programs develop, State and local guidance personnel should be involved in (a) the development of selection standards for specific courses, (b) the development of information needed for the educational and vocational guidance of potential students, and (c) the determination of appropriate guidance, course selection, and enrollment procedures to be used by local schools referring students and graduates or other adults to available training programs.

29. There is need for expansion of the State program of guidance publications to include guidelines, handbooks, occupational and labor market information, and other materials for use by school counselors in helping students plan for in-school and post-high school training.

30. There is need for provision of adequate occupational information and guidance services, particularly in rural areas, which might be met by the establishment of Mobile Vocational Guidance Units to provide guidance services on a scheduled basis in rural areas and also to provide supervisory and/or inservice education services to teacher-counselors in small schools.

CHAPTER 8*

THE SURVEY STAFF'S RECOMMENDATIONS AND SOME OF THEIR MAJOR IMPLICATIONS

A survey report, if it is to be genuinely helpful as a source of guidance for future action, must set forth some proposals for action or at least for serious consideration. These recommendations are really the "pay dirt" of the entire survey effort, for they help to answer the question of "So what?" In formulating their survey recommendations, the members of the Montana Survey Staff attempted to exemplify Survey Principle 19 in Chapter 1, which states:

> The recommendations of the survey staff include sufficient detail to serve as an adequate guide to future action but not so much detail as to deprive responsible people of their rights and responsibilities in carrying the proposed plan forward.

This chapter serves, as did the immediately preceding chapter, a kind of summarizing and synthesizing function. Chapter 7 focused on _what is_ and _what has been_. The focus of Chapter 8 is on _what should be_. Chapter 8 closes with some of the major implications and possible outcomes of the recommendations.

The recommendations which follow have the unanimous approval of the 10-member Survey Staff, eight of whom are national authorities in their respective fields of vocational-technical education. The two other members are nationally recognized in the field of survey work. Their work has included eight special surveys of vocational-technical education, including three on a statewide basis (Maine, Oregon, South Carolina). Whether the educational, economic, and political leadership of Montana gives serious consideration to these recommendations is of far greater significance and value to Montana and its youth than it is to the Survey Staff, either collectively or individually.

The Recommended MASTER PLAN for Montana

Concerning the _major, or basic, components (elements) of public assisted educational efforts in Montana_, IT IS RECOMMENDED:

1. That the three following major components[1] constitute Montana's Statewide system of public educational effort:

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*Prepared by the 10 members of the Montana Survey Staff. The recommendations in Chapter 8 differ somewhat in arrangement and content from those presented by the Survey Staff to the State Board of Education at a meeting on February 11, 1968. That written report was titled _Part II_ of the _Preliminary Report of the Survey Staff._

[1] See Figure 10 on the following page.

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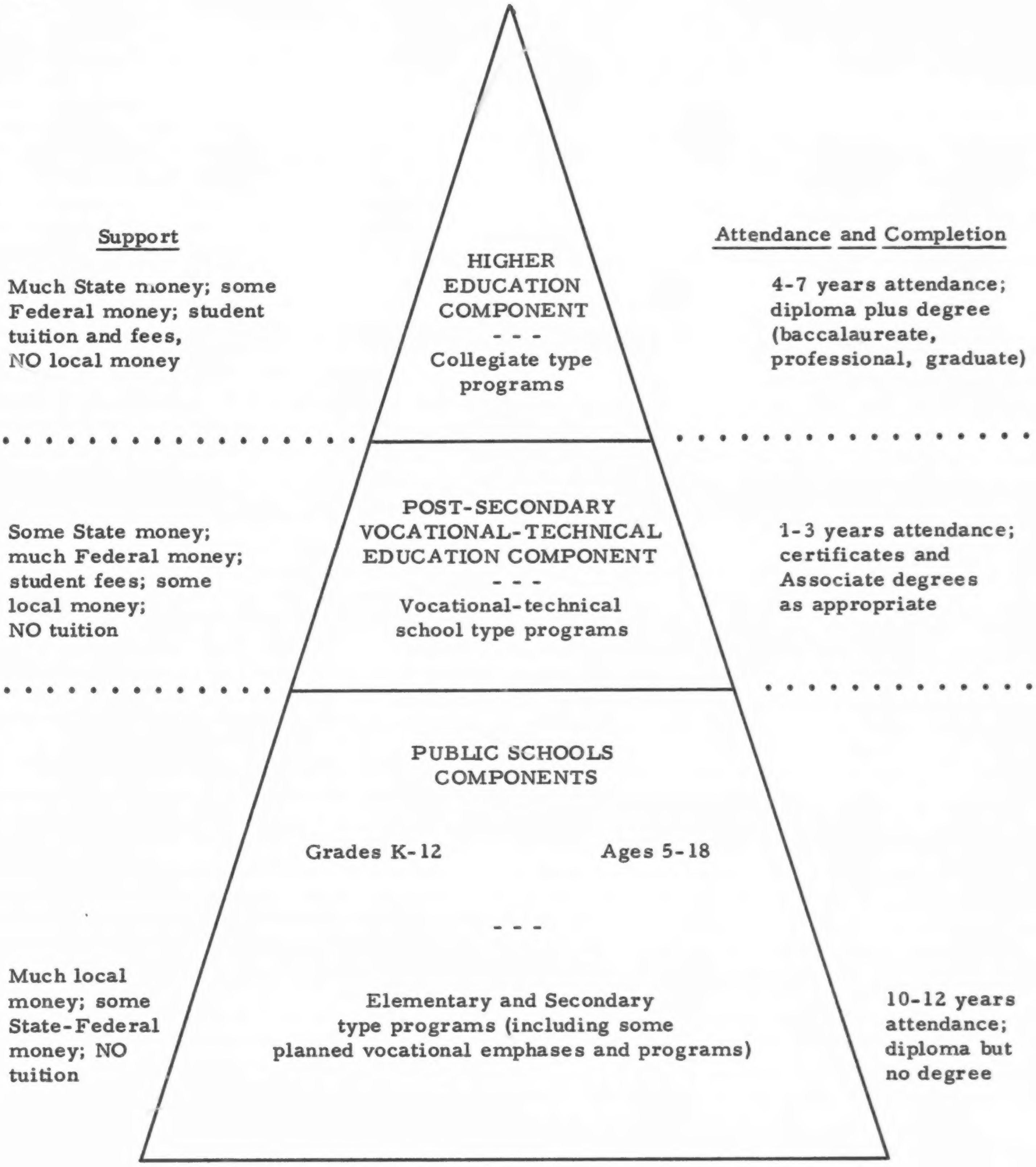
Support
Much State money; some Federal money; student tuition and fees, NO local money
HIGHER EDUCATION COMPONENT
- - -
Collegiate type programs
Attendance and Completion
4-7 years attendance; diploma plus degree (baccalaureate, professional, graduate)
Some State money; much Federal money; student fees; some local money; NO tuition
POST-SECONDARY VOCATIONAL-TECHNICAL EDUCATION COMPONENT
- - -
Vocational-technical school type programs
1-3 years attendance; certificates and Associate degrees as appropriate
PUBLIC SCHOOLS COMPONENTS
Grades K-12
Ages 5-18
- - -
Much local money; some State-Federal money; NO tuition
Elementary and Secondary type programs (including some planned vocational emphases and programs)
10-12 years attendance; diploma but no degree

(This diagram is not presented as a true "educational ladder," nor is the size of each segment of the triangle meant to imply the size of the program as regards the number of institutions or the number of students in that component.)

Figure 10. The recommended pattern of Montana public education

(a) The component often referred to as "the public schools" (K-12), serving basically the span of compulsory ages (7-16 by Montana law) and having general education as its first and primary instructional purpose but with provision also for exploratory, prevocational, and vocational emphases in the program of instruction; and except as hereinafter recommended, to be organized, administered, and financed as is currently being done

(b) The component (new) of post-secondary vocational-technical education, having as its primary instructional purpose the development of skilled craftsmen, technicians, and semiprofessional personnel, but with provision for occupational preparation for anyone desiring such preparation (high school graduates, dropouts, and adults); and to be organized, administered, and financed as hereinafter recommended

(c) The component of higher education, having as its primary instructional purpose the provision of programs leading to baccalaureate, professional, and graduate degrees; and except as hereinafter recommended, to be organized, administered, and financed as is currently being done

2. That the State's leadership (educational, economic, and political) move systematically, through its established channels (Legislative Assembly, various boards and commissions, etc.) to support, with as much equity as possible, the three components; and that, in so doing, the leaders attempt to maintain as clear a distinction as possible among the three components with respect to such things as purposes, programs, organization, administration, staffing, and financing.

3. That the desire of State leadership for a coordinated and interrelated system of components motivate the leaders to avoid falling into the trap of (a) trying to create any type of educational institution which seems to be able "to do all things for all people," (b) attempting to "keep all vested interests happy," or (c) putting political expediency ahead of basic social, economic, and educational needs.

4. That, while life may indeed seem to be a series of compromises, compromise solutions be avoided which in any way jeopardize the distinctive discreteness of the three components recommended.

Concerning the elementary portion (K-6) of the public schools component, IT IS RECOMMENDED:

1. That in the elementary schools the primary emphasis continue to be on the fundamentals represented by the three R's and on the supplementary purposes generally accepted throughout our nation as appropriate for children in kindergarten through grade 6.

2. That, in addition to the "fundamentals" of elementary education, there be added consciously an emphasis on the beginnings of knowledge about and an understanding of the world of work (occupations); the dignity of work; human relations among people living and working together; the place of food, clothing, and housing in our and others' cultures; and the conservation of natural resources.

3. That, in giving maximum meaning and success to the above recommendation, the philosophy of guidance for elementary school ages be exemplified in the elementary schools through knowledgeable teachers, counselors, and school principals.

4. That, starting in kindergarten or grade 1, pupils be introduced, through planned programs, to experiences of an exploratory manipulative type, involving at first the use of the large muscles, and in succeeding grades the increasing use of the smaller (more difficult to control) muscles; and that utilization be made of the types of activity such as those listed on pages 45-46 of Chapter 1.

Concerning the junior high school grades (7-9) of the public schools component, IT IS RECOMMENDED:[2]

1. That the exploratory manipulative experiences systematically provided in kindergarten through grade 6 be continued, with increasing refinements and with growing prevocational emphases in the junior high school grades (7-9); and that these exploratory manipulative experiences be accompanied by reading, discussion, and use of audio-visual aids to provide a growing understanding of the world of work (occupations) and the other occupational aspects introduced at the elementary school level.

2. That pupils of junior high or middle school age, through the personal encouragement and help of understanding teachers and sophisticated counselors, be encouraged and assisted in developing an increasing and realistic awareness of their own aptitudes, abilities, special dexterities, and other personal attributes; and that they begin to focus on possible future occupational plans and the potential means for fulfilling such plans.

3. That the exploratory emphasis in this type of school not be limited to experiences involving a reasonably large amount of manipulation but be extended also to organized exploratory experiences in mathematics, science, art, music, language, and sports.

4. That the organizational lockstep of the school year or the school semester be broken to provide exploratory course opportunities for shorter periods of time; for example, 12 weeks instead of a full semester or a full school year.

Concerning the senior high school grades (10-12) of the public schools component, IT IS RECOMMENDED:

1. That the exploratory emphasis started in the elementary schools and continued through grades 7-9 be extended in grades 10-12 on a planned basis, with increasing use of vocational guidance (and testing) and with a definite trend toward the vocational or occupational emphasis for possible job entry.

2. That in any given school district the prevocational and vocational programs of the senior high school grades (10-12) be established only after careful local study of the high school pupil population (number, type, and interests), the availability in the community of possible occupational experience arrangements for cooperative vocational programs, the possibility of placement after high school graduation, and other relevant factors.

3. That in the making of the local studies, use be made of the published materials from the State's Division of Guidance (or Pupil Personnel) Services; that use be made of professional consultation from vocational-technical education authorities in the units of higher education and the State Department of Public Instruction; and that utilization be made of lay consultation from the local community.

Concerning the (NEW) post-secondary vocational-technical education component of the State's educational efforts, IT IS RECOMMENDED:

1. That the Legislative Assembly by statutory action divide the State into five districts, or administrative units, (covering collectively the entire 56 counties) for post-secondary vocational-technical education, with the boundaries of the five districts delineated as shown in Figure 11.[3]

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[2] The recommendations for junior high or middle schools and senior high schools are limited to aspects of exploratory, prevocational, or vocational education.

[3] See the APPENDIX for tables of comparative data about these five districts.

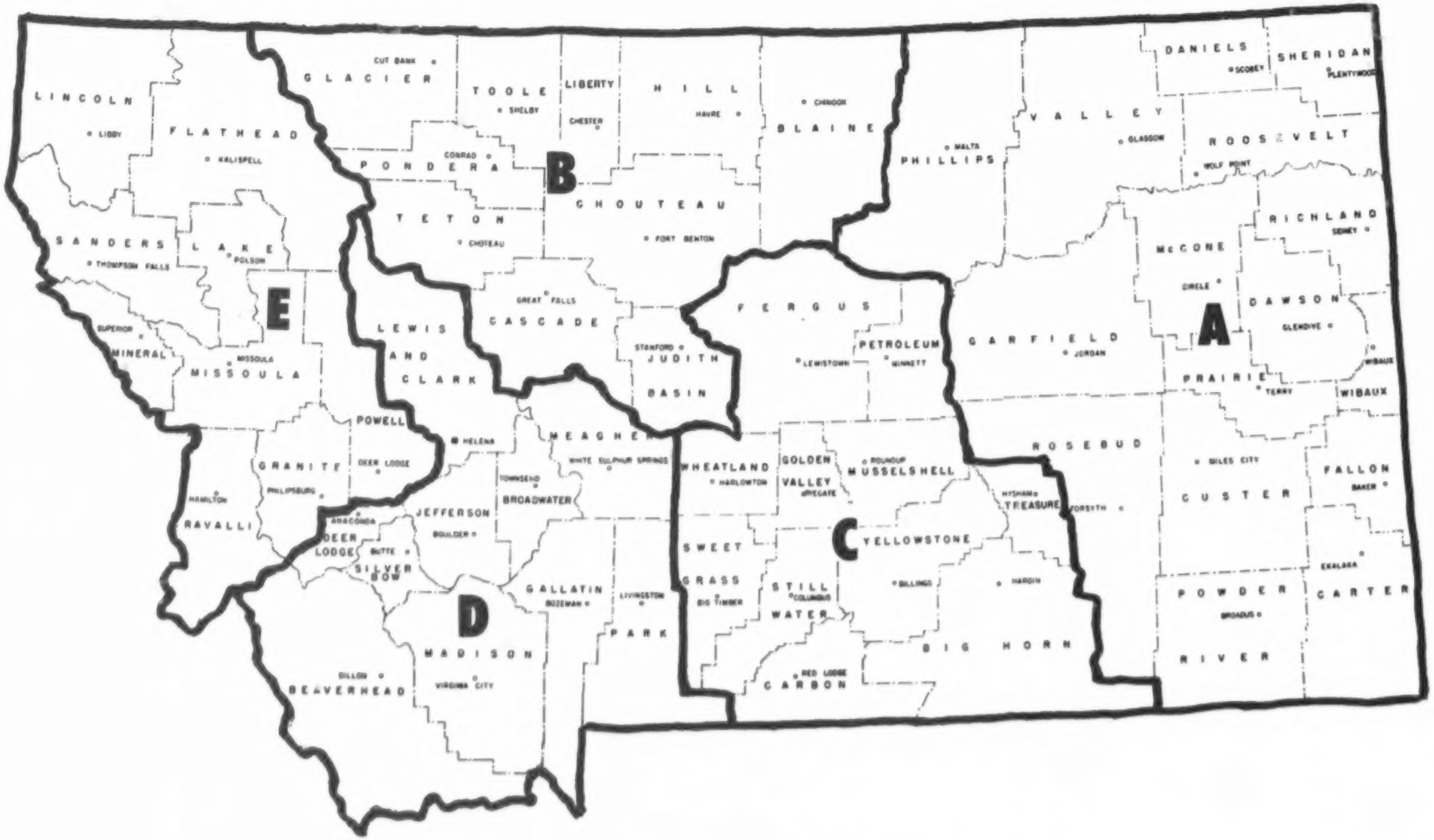
A
B
C
D
E
LINCOLN
LIBBY
FLATHEAD
KALISPELL
GLACIER
CUT BANK
TOOLE
SHELBY
LIBERTY
CHESTER
HILL
HAVRE
BLAINE
CHINOOK
PHILLIPS
MALTA
VALLEY
GLASGOW
DANIELS
SCOBEY
SHERIDAN
PLENTYWOOD
ROOSEVELT
WOLF POINT
RICHLAND
SIDNEY
McCONE
CIRCLE
DAWSON
GLENDIVE
PRAIRIE
TERRY
WIBAUX
WIBAUX
GARFIELD
JORDAN
ROSEBUD
FORSYTH
CUSTER
MILES CITY
FALLON
BAKER
CARTER
EKALAKA
POWDER RIVER
BROADUS
PONDERA
CONRAD
TETON
CHOTEAU
CHOUTEAU
FORT BENTON
SANDERS
THOMPSON FALLS
LAKE
POLSON
MINERAL
SUPERIOR
MISSOULA
MISSOULA
LEWIS AND CLARK
HELENA
CASCADE
GREAT FALLS
JUDITH BASIN
STANFORD
FERGUS
LEWISTOWN
PETROLEUM
WINNETT
POWELL
DEER LODGE
GRANITE
PHILIPSBURG
RAVALLI
HAMILTON
MEAGHER
WHITE SULPHUR SPRINGS
BROADWATER
TOWNSEND
JEFFERSON
BOULDER
DEER LODGE
ANACONDA
SILVER BOW
BUTTE
WHEATLAND
HARLOWTON
GOLDEN VALLEY
RYEGATE
MUSSELSHELL
ROUNDUP
TREASURE
HYSHAM
YELLOWSTONE
BILLINGS
SWEET GRASS
BIG TIMBER
STILLWATER
COLUMBUS
CARBON
RED LODGE
BIG HORN
HARDIN
GALLATIN
BOZEMAN
PARK
LIVINGSTON
MADISON
VIRGINIA CITY
BEAVERHEAD
DILLON

Figure 11. The recommended districts for public post-secondary vocational-technical education in Montana

2. That statutory provision be made requiring that in each district a Vocational-Technical District Board of Education be established in accordance with at least the following characteristics:

   (a) Each board will consist of nine members to be elected at large on a non-partisan ballot, each member to serve three-year terms, with three members being elected every three years, and eligible for re-election.

   (b) Not more than one member may be elected from any given county, and in a District with more than nine counties a plan of rotation should be worked out so that each county in turn will at a given time have an elected representative on the Board.

   (c) The boards for vocational-technical districts will have the same financial powers regarding taxes and bond issues as those given to the boards of trustees of local school districts.

   (d) Each District Board will select annually from its membership a President (Chairman), Vice President (Vice Chairman), and Clerk-Treasurer.

3. That each District Board for Vocational-Technical Education be empowered and urged to establish as soon as possible a vocational-technical education Center, and that in its establishment the Board observe the following factors or criteria for location:

   (a) Located at or near a large urban center of population, usually the largest one within the District, and one having reasonable population growth experience and prospects for future population and economic growth

   (b) Located in urban areas having industry and business, especially diversified as to type

   (c) Located centrally with primary regard to geography and especially to driving time

   (d) Located where there is evidence of demonstrated interest in vocational-technical education

   (e) Located so as to have reasonable access by main highways

4. That the five District Boards for Vocational-Technical Education establish their respective Centers as follows and in the order indicated: District B at Great Falls, District C at Billings, District E at Missoula, District D at Helena, and District A at Miles City; and that every financial effort be made to establish all of them with as little lapse of time as possible.

5. That each District Board for Vocational-Technical Education, in selecting the specific site for its post-secondary Center for Vocational-Technical Education, enlist the assistance of the Division[4] of Vocational-Technical Education in the State Department of Public Instruction and other consultative assistance as it deems necessary and desirable.

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[4] Divisional status for vocational-technical education in the State Department of Public Instruction is recommended later in this chapter.

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6. That District Boards, in establishing their respective Centers, build new physical facilities unless adequate (modern and well-equipped) facilities can be leased or bought from other school districts or other governmental units; but that the use of antiquated, unsafe (often abandoned) structures be avoided.

7. That the Centers be considered as both commuting and residential (dormitory) institutions.

8. That in providing student housing at the Centers, the District Boards give consideration to the use of revenue bonds if such are legal or can be made legal under Montana's finance laws.

9. That with regard to financing, the cost of capital improvements (buildings, site, equipment) be borne on a 50-50 basis - 50 per cent by the vocational-technical District and 50 per cent by combined State and Federal funds; and that the operating costs be borne as follows: one-third by the vocational-technical district, one-third by State funds, and one-third by Federal funds.

10. That a voted minimum school levy be required in each of the five vocational-technical education districts in order to qualify for State and/or Federal funds, that the minimum levy be kept low, and that the minimum be uniform among the five districts.

11. That there be no tuition charge for attending the Centers, but that a uniform system of student fees be established by the State Board for Vocational-Technical Education.

12. That the vocational-technical Centers operate through the State Department of Public Instruction under the supervision of the Division[5] of Vocational-Technical Education and be open to anyone not enrolled full time in any other type of school.

13. That the Centers operate on a calendar of four three-month quarters, with approximately one week of "vacation" between each two consecutive quarters; but that a student's attendance for all four quarters of a school or calendar year be optional with the student.

14. That the District Board select for its Center for vocational-technical education a chief executive officer (administrator) to be known as the Director, who shall be a person with interest and experience in vocational-technical education and with preparation for and experience in general school administration.

15. That the Director then select and recommend to the District Board for appointment additional staff (professional, paraprofessional, office, custodial, and maintenance) as the need indicates and the budget permits, and that the professional staff be eligible for membership in the Montana Vocational Association and the Montana Education Association and its appropriate affiliates.

16. That the staff of the Centers serve as resource personnel (consultative) for (a) assisting local high schools with their exploratory, prevocational, and/or vocational programs, (b) helping with any local adult education programs having a direct occupational (vocational) emphasis, and (c) assisting with work programs for unskilled occupations for less able pupils.

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[5] Divisional status for vocational-technical education is later recommended in this chapter.

17. That the Centers provide appropriate programs for the preparation of skilled and technical workers for job entry, for upgrading in their occupations those already employed, and for the retraining of those whose occupations are becoming obsolete; that these programs provide appropriate courses for the preparation of semiprofessional, or paraprofessional, personnel; and that occupational programs be available for other groups desiring vocational preparation.

18. That for the completion of semiprofessional (paraprofessional) programs of at least two years in length, appropriate Associate degrees be granted, and that for other programs appropriate certificates of completion be granted.

19. That each Center District Board, in determining from the several possible offerings its own instructional program, base its decisions on a careful study of student needs, employment opportunities, and other relevant factors; and that, in so doing, the Board enlist the help of State and other personnel who are authorities in post-secondary vocational-technical programs.

20. That the vocational-technical education Centers provide a variety of appropriate clubs and other extracurricular activities, including intramural sports; but that interscholastic athletic competition be forbidden.

21. That the establishing of programs in the various Centers be under the general supervision and approval of the State Board for Vocational-Technical Education, assisted by the Director of Vocational-Technical Education and his professional staff, in order to minimize unnecessary duplication of offerings and to provide for some allocation of specialties in those course areas where need does not warrant offerings in more than one Center.

22. That the State Board for Vocational Education, with the assistance of the Assistant Executive Officer[6] for vocational-technical education develop a plan whereby students from a given district may attend a Center in another when the district of residence does not provide the desired vocational-technical program.

23. That the State Board of Education not grant to any additional local school districts "area" designation in the meaning currently applicable in Montana, and that the designations now being applied to two local districts be withdrawn in favor of the recommended new post-secondary Centers for Vocational-Technical Education.

Concerning the higher education component of the State's educational efforts, IT IS RECOMMENDED:

1. That the State Constitution be amended to permit the creation of a new Board of Higher Education to serve as the major (State-level) policy-making body for the Montana System of Higher Education,[7] and that such a Board then be created by statute.

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[6] It is later recommended in this chapter that the Director of Vocational-Technical Education serve also as the Assistant Executive Officer to meet with the State Board for Vocational Education.

[7] The Survey Staff proposes this term in lieu of "Montana University System" since only two of the institutions are universities (a collection of colleges and/or schools), but all six institutions are institutions of higher education.

2. That the Board of Higher Education consist of nine members to be appointed by the Governor, with the advice and consent of the Senate and with no *ex officio* membership; and that the members serve overlapping terms of nine years and *not* be eligible for reappointment.

3. That the members of the Board of Higher Education be representative of the State geographically, that no more than five members be from the same political party, and that the members be representative of the industries, businesses, and professions in the State.

4. That the Board select from its membership to serve one-year terms a President (Chairman), Vice President (Vice Chairman), and Secretary.

5. That the work of any State institution offering programs designed specifically to lead to a baccalaureate, professional, or graduate degree come within the legal purview of the State Board of Higher Education.

6. That teacher education for the vocational-technical areas, in so far as possible in terms of commitments already made by the State Board of Education, be concentrated at Montana State University where much of it is currently.

7. That approval be given to a well-designed and well-staffed program at Montana State University leading to a Master of Education degree for administrators of programs of vocational-technical education.

8. That increasing attention be given by teacher educators in the vocational-technical areas to the inservice education of vocational-technical teachers.

Concerning the *general improvement of vocational-technical education in Montana*, IT IS RECOMMENDED:

1. That the State Board of Education continue to serve also as the State Board for Vocational-Technical Education, but that the State Constitution and State laws be amended to create or permit the changes recommended below.

2. That the State Board of Education consist of three members elected by popular vote on a nonpartisan ballot from each of the five districts for vocational-technical education, that these 15 members be elected for overlapping terms of five years, and that they be eligible for re-election.

3. That it be recognized that concurrent membership on the State Board of Education and on either the recommended district boards for vocational-technical education or the existing local boards of school trustees constitutes a conflict of interest, and that such concurrent membership be deemed unlawful.

4. That the professional qualifications of the State Superintendent of Public Instruction be raised, that he be appointed by the State Board of Education to serve as its chief executive officer, and that all other professional personnel of the State Department of Public Instruction be appointed by the State Board of Education upon the recommendation of the State Superintendent.

5. That the State Department of Public Instruction be so organized as to give *divisional* status to vocational-technical education; that the Director of Vocational-Technical Education be assigned the additional role of Assistant Executive Officer for Vocational-Technical Education and, as such, meet regularly with the State Board for Vocational-Technical Education; that the Director of the Division of General Education be assigned the additional role of Assistant Executive Officer for General Education and, as such,

meet with the State Board of Education; and that the implementation of this recommendation be made at the earliest feasible time.

6. That the State Board for Vocational-Technical Education have full responsibility for vocational-technical education programs in all public schools other than units of the System of Higher Education, and that there it have a joint responsibility with the recommended Board of Higher Education.

7. That increasing responsibility be given to the Director of Vocational-Technical Education and the heads of the various vocational services in his Division in the determination of budgets and the allocations of monies for vocational expenditures, and that the Director and his staff then be held responsible for the administration of this fiscal responsibility under the general supervision of the Office of the Superintendent of Public Instruction.

8. That the plan of State reimbursement for vocational-technical education to local school districts having approved programs under State jurisdiction and to the vocational-technical teacher education in public higher education be on a 50 per cent basis.

9. That a more liberal policy of providing travel funds for out-of-State professional travel be established and implemented.

10. That the Research Coordinating Unit become a definite subunit of the Division of Vocational-Technical Education, responsible to the Division Director.

11. That all of the vocational-technical services located in the State Department of Public Instruction make a combined effort to improve communication among themselves, with the lay and professional field, and with other divisions or components within the State Department of Public Instruction; and that in order to improve communication, cooperation, and coordination among themselves, all of the various vocational-technical services and their Director be housed in offices in reasonable proximity to one another.

12. That the State professional staff for vocational-technical education begin at once to hold regular and separate staff meetings chaired by the Director of Vocational-Technical Education to discuss problems peculiar to their programs and to plan for improvements of their several services.

13. That within the State Department of Public Instruction the components of general education and vocational-technical education cooperate closely as professionals when there appears to be mutal benefit, but that neither be subsumed organization-wise under the other since their basic purposes are diverse.

14. That the endorsement requirements necessary for the certification of teachers in the various vocational-technical services be cooperatively developed and then set forth as explicitly as possible in the State certification brochure.

15. That the practice of having a State Advisory Council be continued, but that, in order that it be more representative of the occupational interests of the State, its membership be increased to at least 11; that one of its major assignments be that of ferreting out problems and needs as related to Montana's economy and proposing possible solutions to the State Board for Vocational-Technical Education; that it meet at least quarterly; and that the Director of Vocational-Technical Education always meet with it in his role as Assistant Executive Officer for Vocational-Technical Education.

16. That the State professional leadership responsible for the growth and improvement of vocational-technical education capitalize on the demonstrated interests of the

State's news media for increased communication regarding the needs for such growth and improvement.

17. That adult education programs with a definite vocational (occupational) emphasis come under the general purview of the Division of Vocational-Technical Education, and that adult education with a definite general education emphasis come under the purview of general education in the State Department of Public Instruction.

18. That the working relationship between the professional staff of the Division of Vocational-Technical Education and the teacher educators in the vocational-technical areas be really functional and on an organized basis.

19. That cooperative efforts be made by the State Department of Public Instruction, including the Division of Vocational-Technical Education, to provide a more systematic plan of communication to the professional field regarding such things as policies, guidelines, criteria, standards, personnel, programs, educational finances, educational needs, and educational plans.

20. That a moratorium[8] on the establishment of community (or junior) colleges be declared until the State has decided definitely on its basic approach to meeting the needs for post-secondary vocational-technical education, and that then the State Board of Education determine the role of the existing community colleges in the State's public educational effort.

21. That greater and better use be made of lay advisory committees in all areas of vocational-technical education at the State, regional, and local levels.

22. That efforts be made to accelerate the slow progress in Montana of the reorganization of school districts and the consolidation of school centers in order to provide larger attendance centers, particularly at the high school level, which, in turn, will make more feasible the establishment and operation of successful and economical programs of prevocational and vocational education.

Recommendations about the Various Vocational Services

Concerning Montana's program of vocational education in agriculture, IT IS RECOMMENDED:

1. That the staff for the vocational agriculture services of the State office be increased to provide at least two full-time persons (a supervisor and an assistant) who shall be qualified by training and experience to give the currently needed State leadership and who shall have no substantial duties outside vocational education in agriculture.

2. That a State Advisory Committee representative of the agricultural interests of the State be appointed and used for the Statewide program of vocational education in agriculture, and that each local program be required to have a functional local advisory committee.

3. That the State staff in vocational education in agriculture develop objective criteria, or standards, for determining (a) in what schools the establishment of new departments of vocational agriculture is justified and (b) in what schools there is justification for the continuation of reimbursed departments of vocational agriculture.

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[8] Hardly needed in view of the establishment of only three such institutions in approximately three decades (since 1939).

4. That the State staff establish written criteria, policies, and procedures for each type of vocational agriculture program, and that reimbursement be provided only to those school districts meeting these standards.

5. That consideration be given by the State staff to a policy of serving the vocational agriculture needs of small high schools and their communities through a program of cooperative or shared services in which the resources of two or more school districts would be combined and utilized for the benefit of each participating district.

6. That the establishment of any new high school program of vocational agriculture or the continued support of existing programs with Federal and/or State funds be justified only on the basis of a comprehensive program of agricultural education designed to serve occupational objectives of both high school and out-of-school youth and adults.

7. That further and continuing attention of the State supervisory staff and the State teacher training staff be given to the revision and improvement of the State vocational agriculture curriculum guide to ensure that it is realistic in light of actual and anticipated opportunities for gainful employment in agricultural occupations.

8. That the State staff aid each high school offering vocational agriculture in developing sufficient flexibility of program to meet the needs of both the agriculture student who will go immediately into farming after high school graduation and the student who will pursue further education and training in a post-secondary center or in a four-year college.

9. That a stronger emphasis be placed on the program of the Future Farmers of America to the extent that each high school vocational agriculture program will use the FFA program as an integral part of its curriculum to develop agricultural leadership, citizenship, and cooperation among all vocational agriculture students.

10. That attention of State supervisory and State teacher training staffs be given to upgrading and enhancing classroom teaching through strengthening agricultural libraries of local departments.

11. That a continuing program of research be set up to study problems pertinent to the success of the program of vocational agriculture and to establish criteria needed for evaluating all phases of the program.

12. That the State staff make a thorough and careful appraisal of the need for post-high school education in agriculture, including the nature and content of courses, the requirements for facilities and equipment, the current and anticipated demand for highly trained or specialized workers, available instructional personnel, location of training centers, qualifications for enrollment, recruitment of students, costs, and other information pertinent to the establishment of agricultural courses in proposed post-high school training centers.

13. That the teacher training program in agricultural education be expanded to include a minor in Agriculture Business Education in the preservice phase, that it provide a stronger emphasis in agricultural mechanics, and that inservice teacher training be extended to a follow-up program in the field with new and old teachers of vocational agriculture.

14. That teacher education in agriculture at Montana State University be reimbursed by the State Board of Education on a 50 per cent basis for the preservice and inservice training rendered to the State's program of vocational agriculture.

15. That steps be taken to secure greater State financial support for vocational agriculture to provide 50 per cent State reimbursement for salaries on that portion of a local high school vocational agriculture teacher's time devoted exclusively to vocational agriculture.

16. That the State staff implement a Statewide program of public information and public relations to publicize, inform, promote, and improve the program of vocational agriculture in Montana.

17. That the State staff give leadership to a plan of coordinated and cooperative effort to improve and maintain an effective Statewide program of vocational education in agriculture through a coordinating council or other means of involving representatives of all major types of agriculture agencies, organizations, and groups of the State.

18. That the instructional program of the junior high school or middle school provide for general agriculture, supplemented by some shop experience in industrial arts.

19. That at the senior high school level the following be considered appropriate types of courses for developing a program of vocational agriculture:

    Livestock production (feeding, care and management, sanitation and disease control, marketing)
    Crop production (cultural practices, soil conservation, disease and insect control, marketing)
    Farm management (farm or ranch and home plan, land utilization and management, farm records and accounting, farm surveying and layout)
    Agricultural mechanics (farm machinery operation and maintenance, farm power - motors and engines, farm building and equipment construction)

20. That each agriculture student in high school be required to participate in an agriculture experience program of "production," "supplementary practices," or "farm business placement" during each year he is enrolled in high school vocational agriculture.

21. That the following be considered appropriate as possible offerings in vocational agriculture for the new post-secondary vocational-technical education Centers:

    Animal and poultry science technology
    Plant and soil science technology
    Ornamental horticulture
    Soil and water management
    Farm and ranch business organization and management
    Agriculture merchandising (buying, selling, servicing)
    Marketing, processing, and distribution of agricultural commodities
    Milling and elevator industry (feed, seed, and grain)
    Farm power (generation, distribution, utilization)
    Farm and ranch equipment (sales and servicing)
    Agriculture chemicals
    Agricultural cooperatives (organization and management)
    Production agriculture
    Heavy equipment maintenance, operation, repair and adjustment
    Other specialized courses relating to peculiar or special industries; *e.g.*, timber production and/or management

Concerning Montana's program of education in vocational home economics, IT IS RECOMMENDED:

1. That the excellent cooperative program planning of the State supervisors and teacher educators be continued and expanded to include the setting up of long-term goals, that home economics teachers be included in this planning, and that all involved take part in evaluating each year's work in terms of the objectives.

2. That the State Supervisors of Home Economics Education be commended for publishing the bulletin, "Vocational Home Economics Education... Planning for Effective Teaching," in October, 1967.

3. That the State supervisors publish a policy bulletin which would include such topics as standards for reimbursed programs (including guidelines for developing gainful employment programs at the various levels), reimbursement policies, and other information which would be easily accessible for teachers and administrators to use in planning or evaluating local programs.

4. That efforts be made to involve teachers in planning for annual State vocational conferences and/or area conferences as a means of developing leadership, and that "Show and Tell" sessions at these conferences provide an opportunity for teachers to describe innovations and happenings in their departments so that these sessions might serve to stimulate other teachers to try promising practices.

5. That the graduate research program in home economics at Montana State University be strengthened by encouraging teachers working for Masters' degrees to write theses rather than to earn additional credits and write graduate papers, and that the State supervisors submit to the teacher educator and/or Director of the School of Home Economics suggestions for research studies that are needed in the field of home economics education.

6. That an additional full-time teacher educator be hired for Montana State University so that additional time is made available for working on research with graduate students, for supervising student teachers and first-year graduates, and for directing preservice and inservice education activities, including the development of curriculum guides and other instructional materials for home economics teachers.

7. That contracts be established by the State Board of Education for the teacher education programs at both universities which would define the responsibilities of the institution and of the State Department; and that periodic reviews of each of the preservice and inservice education programs be made cooperatively by the State Supervisor of Home Economics, the teacher educator(s), and the administrative head of the school or department of home economics.

8. That, in addition to the effort currently being expended to initiate gainful employment programs in home economics, education for homemaking continue to be expanded and strengthened, and that opportunities be found to include more boys in the program.

9. That encouragement be given to schools to offer a course for senior boys and girls on Courtship and Marriage; that such a course include preparation for marriage, the family in our democratic society, preparation for parenthood, family finance, and home management; and that, wherever possible, the team approach to instruction be followed.

10. That, in order to stimulate the growth of a variety of adult education programs in homemaking education and for gainful employment, short summer workshops for teachers and potential teachers of adult programs be established by the State staff

in cooperation with the teacher training institutions; that course outlines and lesson plans be developed in a variety of areas for the purpose of making these available to teachers of adult classes; and that potential teachers for areas other than clothing construction be especially recruited for training.

11. That the practice be continued of publishing reports of graduate workshops in home economics.

12. That a program of teacher recruitment be expanded to include graduate home economists not currently working who might be encouraged to return to teaching after a concentrated summer workshop or through a planned program to meet certification requirements.

13. That in schools where growing enrollments have limited the expansion of the home economics program within the assigned home economics laboratory facilities, home economics expand into other available classrooms for teaching units or courses in home economics which do not require a laboratory.

14. That open-ended programs be provided which will enable students to move from an introductory occupational program at the high school level to a post-high school program or even into a four-year college program, and that occupational curricula lead to identifiable occupations so that when the student has finished he is ready for a job.

15. That, if and when programs to train for gainful employment in the food service industry are started, consideration be given to extending cooperative work experience into the summer months when opportunities for employment are greater due to the summer tourist industry.

16. That, in communities where many mothers work, local schools survey the need to offer a training program for child-care aides; that preparatory and supplementary courses be available to adults in child-care services; and that programs to train persons as directors or assistants in licensed day-care centers be established at the post-secondary school level.

17. That an introduction to the world of work unit be offered at the ninth grade level in homemaking classes to include opportunities for employment in occupations related to the skills of home economics; that such a unit include opportunities for high school training, post-secondary or community college training, and careers requiring a college degree; and that career opportunities in home economics be an integral part of each home economics course taught.

18. That home economics education majors at the two universities which prepare teachers encourage these students to secure some work experience in occupations related to home economics in order that they will be better prepared to teach gainful employment programs.

19. That potential teachers or administrators of gainful employment programs have an opportunity to visit successful programs of a similar kind in Montana or in other states.

20. That where strong general homemaking courses are established in grades 7, 8, and 9, high schools offer some semester depth courses or special interest courses in areas such as, but not limited to, the following: marriage and the family, housing and home furnishings, and consumer education; and that the State supervisory staff encourage the two universities offering home economics education programs to offer workshops for the development of curricula for semester courses of this type.

21. That in communities where a number of food establishments are located, an advisory committee investigate opportunities for food service training programs at all levels, and that schools attempt to meet employment needs.

22. That State Supervisors of Home Economics Education meet with the State supervisors of the other occupational areas to analyze ways in which home economics could be coordinated with other vocational education services.

23. That home economics education and distributive education consider ways in which they can cooperate in programs at the post-secondary school level to train for clothing services, fashion merchandising, or fashion trades.

24. That State Supervisors of Home Economics Education work with the State Supervisor of Health Occupations to analyze ways in which home economics can make a contribution to preparation for some of the health occupations through a team teaching effort in such health areas as home health aides, nurses' aides, dietician assistants, and companions for the elderly.

25. That schools preparing persons for employment operate a placement agency and take major responsibility for placement of graduates.

26. That the fine guidance presently being provided by the State supervisory staff to the Montana Association of Future Homemakers be continued in order that the organization may continue its work of helping youth develop leadership for good home and community life.

27. That advisory committees for occupations related to home economics be established for each gainful employment program to study employment opportunities and to recommend training programs at the different levels.

28. That the State staff in home economics, in cooperation with the teacher educators in this subject, develop and implement a program for the production of curriculum materials for the program.

29. That encouragement be given to Montana State University to improve the physical facilities in the Department of Home Economics.

30. That at the junior high school or middle school, pupils be introduced to all areas of home economics at the seventh and eighth grade levels, with emphasis on the unique concerns of this age group such as (a) the growing up process, (b) getting along with others of all ages, and (c) responsibility as a member of a family; and that at the ninth grade level, pupils be introduced to homemaking and home economics related occupations, with special emphasis on personal development and family living.

31. That at the senior high school level the following be considered as appropriate to choose from in developing the home economics program for a given high school:

    Family relations
    Child development
    Foods and nutrition
    Housing and home furnishings
    Management of resources

    and

    Gainful employment related to home economics, including food services, clothing services, child-care services, housing and home furnishing services, and home and institutional services[9]

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[9] For further Survey Staff approved offerings for high schools see the October, 1967 bulletin, "Vocational Home Economics Planning for Effective Teaching," prepared by the Montana State Supervisors of Home Economics.

32. That the following be considered appropriate as possible offerings in the programs of home economics in the new post-secondary vocational-technical education Centers:

    Food service management (or supervision)
    School and institutional cooking
    Catering
    Prekindergarten teaching or assisting with teaching
    Fashion trades (in cooperation with distributive education)
    Child-care training
    Assisting in day-care centers
    Assisting with home health problems (in cooperation with health services)
    Homemaker services
    Health services (a cluster in cooperation with health occupations)
    Clothing services (construction, alterations, and retailing)

Concerning Montana's program of distributive education, IT IS RECOMMENDED:

1. That career preparatory distributive education programs remain in the high schools except where enrollments are too small to justify even a minimum program or where specialized preparation, such as food merchandising, would involve only a few students from each school; and that equivalent post-secondary career preparatory programs be instituted in addition to preparation for out-of-school youth and for adults who need full-time preparation for entry jobs in marketing.

2. That a full-range program of midmanagement training for distributive and marketing positions leading to an Associate degree be undertaken at no fewer than three major post-high school centers in the State; and that no program be established without functioning advisory committees for each specialized curriculum option (field).

3. That emphasis in the development of post-high school level curricula be placed especially on the marketing areas of specialization such as, for example, retail merchandising (including specialties by merchandise lines as needed); small business management; tourism, hotel, and restaurant management; insurance; and wholesaling.

4. That steps be taken to develop a planned, coordinated, and comprehensive program of adult education which will provide for retraining and updating, will meet advancement needs, and will relate to all three levels: rank and file, midmanagement, and management.

5. That in developing the comprehensive program of adult education the State staff in distributive education work vigorously with trade association groups in distribution and marketing to provide a continuing education program through articulated efforts of university units (continuing education divisions and schools of business administration), adult education coordinators in post-secondary schools, and teacher-coordinators of distributive education in high schools; and that the program be carried on in a number of coordinated centers in the State, with whatever assistance can be given to smaller communities to meet local special needs.

6. That a State advisory committee of businessmen, school administrators, and teachers be established to provide feedback as to the effectiveness of present programming, to serve as a communications vehicle, and to assist in determining the directions for the development of distributive education in Montana at all levels; and that the committee be named and established at the personal direction of the State Director of Vocational-Technical Education.

7. That only one institution of higher education be designated to provide a full-range program of distributive teacher education so that quality and quantity can be maintained and duplication of effort can be avoided.

8. That experimental programs in distributive education be developed under the cooperative leadership of State supervision and teacher education to determine the type of distributive education program best suited to the majority of Montana high schools (those in cities or areas of less than 10,000 population and with 600-800 or under high school enrollment), and that controlled experimentation take place to determine the value of the project method of instruction in distributive education in such schools.

9. That an intensive program be started to provide counselors with adequate understanding of the nature of vocational instruction in distributive education and the need to provide education for only those students who need it, want it, and can demonstrate the capacity to profit from it.

10. That all high school programs in distributive education be two years in length, with the grade 11 program being a prerequisite course devoted to developing an understanding of the principles of marketing.

11. That steps be taken to ensure that all distributive education cooperative student-learners are enrolled in the control class taught by the teacher-coordinator, that students who are not placed in an occupational training station at the beginning of the school year are eliminated from distributive education cooperative related classes, and that every program has a functioning advisory committee.

12. That every teacher-coordinator be provided no less than a half-hour per student per week for coordination time, or approximately one-half the school day for a program of 25 to 30 students.

13. That emphasis continue on making the program of the Chapter of Distributive Education Clubs of America (DECA) an integral part of the instruction in every school program.

14. That more State staff and teacher-educator time be devoted to consultation with local school personnel, on-site visitations, program promotion, and inservice education.

15. That high school distributive education programs be established in all communities of 10,000 or over, and that schools in the three largest Montana cities consider doubling their present programs.

16. That the Statewide association of teachers and teacher-coordinators of distributive education be strengthened to promote professional advancement, the understanding of the goals of distributive education among school personnel and businessmen, and cooperation with other fields of vocational education.

17. That when post-high school distributive programs are developed, assurance be given that students are provided appropriately related general education as well as opportunity for adequate, directed occupational experience (internship) which will provide an in-depth experience aimed toward the midmanagement level and which will put theory to the test of practice.

18. That Montana State University be given, upon submission of an appropriate plan, the authorization and appropriate resources (a) to develop a Master's Degree with specialization in Distributive Education and (b) to plan and operate an across-the-board leadership development program in vocational education in which distributive education is partner with other teacher education services in the vocational fields.

19. That earmarked resources be set aside for curriculum development research concerning the project plan of instruction in schools selected as pilot schools and operating in a curriculum development program led by the teacher educator in distributive education.

20. That the teacher education institution be provided resources earmarked for initiating a research program for the purpose of developing curriculum guides and other instructional materials.

21. That every effort be made by distributive education personnel to work closely with staff in the fields of homemaking, agriculture, technical, and office education in order to build curricula which cut across fields; for example, fashion merchandising; agricultural sales and service; industrial sales; and credit, insurance, and banking.

22. That written guidelines for program operation be published by the Division of Vocational-Technical Education along with statements of policy regarding the development of the distributive education program.

23. That the existing State staff position be concerned exclusively with distributive education, and that consideration be given to creating an additional position in distributive education to be responsible for the development of the adult education program in this subject field.

24. That in the high school, separate general courses in salesmanship and retailing be discontinued; that an introduction to distribution and marketing be offered in grade 11 (and as an elective in grade 12); and that in grade 12 advanced distributive education be offered, combined with a two-period project laboratory or cooperative occupational education.

25. That in the new post-secondary vocational-technical Centers the following types of courses be considered appropriate for distributive education:

    (a) Two-year Associate degree curricula in:

    Retail merchandising, including specialties as needed, such as fashion merchandising, supermarket merchandising, petroleum merchandising, display, and mass merchandising
    Insurance
    Tourism (hotel and restaurant management)
    Industrial and agricultural marketing and sales (in cooperation with agricultural education and industrial-technical education)
    Wholesaling management
    Professional sales
    Lumber merchandising
    Credit and collections

    (b) For those not having had high school distributive education:

    Career preparation (same as high school except condensed into an intensive 30-hour-per-week schedule for one year), with an emphasis upon individual specialties such as display or product lines

    (c) For anyone desiring them, short-term courses (three to six months) for basic jobs such as sales clerk and cashier-checker

Concerning Montana's program of office and business education, IT IS RECOMMENDED:

1. That where sufficient numbers of pupils are available and adequate use of facilities can be made, secondary school programs of office education remain in the high school as an integral part of the program of the comprehensive high school, and that the high school program in office and business education be concentrated on clerical and stenographic preparation.

2. That assigning high school pupils in office education to a separate vocational-technical facility for all or part of a school day be avoided.

3. That post-secondary vocational-technical schools offer semiprofessional curricula of Associate degree status, clerical and stenographic programs for out-of-school youth, and continuing education programs for adults.

4. That a State staff position exclusively concerned with office and business education be created as soon as possible in the State Division of Vocational-Technical Education in order to provide more leadership time for this important field; that initially this position be considered as separate and apart from the position of Supervisor of Distributive Education so that the two positions represent separate vocational services; and that later an Associate Supervisor be added to the office and business education service for the supervision of nonvocational business education.

5. That specific requirements for vocational certification and program operation for office education be developed and published by the State Department, and that the certification requirements emphasize the blending of professional preparation, occupational experience, and substantive content in business administration.

6. That, regarding teacher education programs, at least two teacher training institutions be designated by the State Board of Education for vocational office teacher education so that both quality and quantity standards can be maintained with a consequent minimum investment and the avoidance of unnecessary duplication of effort.

7. That the following steps be encouraged to develop more effective office education programs in the high schools:

   (a) Re-evaluate tools of instruction, methods of instruction, and course offerings for extension and modification of programs to provide for genuine laboratory instruction and individual learning needs through cooperative education and senior block-time approaches.

   (b) Initiate follow-up studies, community surveys, and a program of formal student placement for graduates.

   (c) Keep abreast of job requirements and occupational trends.

   (d) Increase local district's support of inservice programs, conferences, and workshops to obtain a realistic philosophy concerning the department's general and vocational educational goals and to upgrade methods of instruction and instructional materials.

   (e) Provide time and opportunity for teachers to assume leadership roles in extending and modifying programs.

   (f) Plan programs for other than the academically talented.

   (g) Schedule classes more effectively to avoid conflicts and unavailability of necessary equipment and space.

8. That the State staff and teacher educators, working as a team, provide immediately a scheduled series of one-day meetings at appropriate local or regional centers to explain to school administrators, counselors, and others what constitutes high school and post-secondary vocational office education and to present to them guidelines for operating programs in this field.

9. That State staff establish a business curriculum study program for the State through which all or most high school districts would complete curriculum studies over a period of from three to five years, and that a community be required to complete such a study within five years in order to qualify for future reimbursement of its program.

10. That the funding of the above study provide:

    (a) adequate consultation by teacher educators

    (b) a one-day workshop to train the local curriculum study leader from each community

    (c) some released time for the study leader and also provision for expert consultation by leaders in business education

11. That immediate attention be given at State and local levels to developing a vocational office education youth group program which will provide, as DECA does for distributive education, leadership experiences and contribute markedly to the instructional objectives and the development of career goals in office education; and that it be one criterion of local program quality that a vocational office education program have a functioning youth organization as part of the instructional program.

12. That a major effort be made to improve office education in small rural schools by providing a series of intensive summer institutes in office education at least two to four weeks long, and that teachers be eligible for a stipend to provide living expenses and tuition if they teach in schools in communities below 5,000 population. (The teacher would pay her own tuition if she expected graduate credit.)

13. That semiprofessional curricula of two-years in length and of Associate degree caliber be created in five major population centers; that these curricula include secretarial administration, office management, technical accounting, and data processing; and that these schools offer also curricula which prepare skilled clerical and stenographic employees.

14. That the State staff take immediate steps to provide for the development and distribution of appropriate curriculum guides and instructional materials related to office and business education.

15. That all cooperative programs be provided with coordination time of at least one-half hour per student per week, with a related class in which all cooperative trainees enroll as a group, and with training stations outside school offices.

16. That more teacher education time be devoted to research and field service, including inservice education, program development, and consultation with local personnel.

17. That immediate efforts be made to develop an adult education program which will provide for upgrading and advancement, for retraining, and for office management.

18. That a State Advisory Committee be established for office education, and that local communities develop similar advisory committees.

19. That the equipping of office laboratories be given priority in reimbursement policies and be based on the policy that the laboratory be brought up to a minimum standard in one school year rather than by piecemeal acquisitions of instructional items.

20. That in the junior high school or middle school the offerings in business education consist of exploratory general business and personal typewriting.

21. That in the senior high school the offerings considered appropriate for business education be general business, typewriting (one semester required for everyone), bookkeeping, and introduction to data processing; and that the offerings appropriate for vocational office education be as follows:

    (a) Stenographic (beginning shorthand, three-hour stenographic block or cooperative office education program with a related class)

    (b) Clerical (three-hour clerical block or cooperative office education program with a related class)

    (c) Data processing and bookkeeping (three-hour senior block)

22. That for the new post-secondary vocational-technical Centers, the following types of courses be considered appropriate for office education:

    (a) Two-year Associate degree curricula:

    Executive secretarial
    Stenographic (including medical and legal specialties)
    Office management
    Data processing programming
    Banking
    Junior accounting

    (b) For those who have not had high school business or office education:

    Same program as suggested earlier for high schools except it would operate at the post-secondary on an intensive 30-hour-per-week basis for a total of one year

    (c) For anyone interested, special short-term courses could be offered for such occupations as key punch operator and office machine operator

Concerning Montana's programs of trade and industrial education and technical education, IT IS RECOMMENDED:

1. That hereafter trade and industrial education courses be offered in only the new post-secondary vocational-technical education Centers recommended as a part of Montana's Master Plan.

2. That technical education programs funded in part from Federal vocational education funds be hereafter concentrated in the new post-secondary vocational-technical Centers recommended earlier and be focused on the preparation of technicians in programs not to exceed three years in length.

3. That the State Department of Public Instruction make a concentrated effort to encourage local boards of school trustees to develop new programs in industrial arts in the secondary schools and to expand existing programs of this type in the secondary schools.

4. That the State Board of Education employ a State supervisor of Industrial Arts Education, and that his work be coordinated with that of the State supervisors of trade and industrial and technical education.

5. That the State Board of Education employ an Assistant State Supervisor of Trade and Industrial Education in order to help relieve the work load of the State supervisor.

6. That the State supervisors of trade and industrial and technical education and the recommended State Supervisor of Industrial Arts Education be combined into one administrative unit as a part of the Division of Vocational-Technical Education.

7. That all approved programs of trade and industrial and technical education be required to operate with functioning advisory committees, and that continuous coordination between the Centers and the employers be maintained.

8. That a Statewide advisory committee on trade and industrial and technical education be appointed to advise the State supervisors in connection with the progressive development of these areas of education.

9. That State and other supervisory personnel in trade and industrial and technical education cooperatively prepare and place into use student admission standards and selection procedures for all occupational classifications for which training is provided.

10. That standards be developed and put into use by the State staff with regard to housing, equipping, and block scheduling for programs of trade and industrial and technical education.

11. That the State staff develop a brochure on trade and industrial and technical education which will help school administrators, counselors, and other interested parties to understand clearly the purposes and objectives of these areas of education.

12. That job qualifications and specifications be developed for all members of the State staff in trade and industrial and technical education, outlining the duties, functions, responsibilities, and relationships for each position.

13. That the State staff in trade and industrial and technical education encourage post-secondary Centers to adopt a shop equipment replacement program in order to provide for the replacement of worn out and obsolete equipment at reasonable intervals.

14. That the State begin immediately to prepare a five-year plan of activities for continued development of trade and industrial and technical education.

15. That a research committee be established, composed of State staff and vocational-technical school district personnel, and that this committee be responsible for exploring, evaluating, and recommending research projects in trade and industrial and technical education which could be referred to the Research Coordinating Unit or to an appropriate teacher training institution for implementation.

16. That the State staff develop and implement a program for the production of instructional materials for the trade and industrial and technical education programs.

17. That a long-range program be developed by the State staff for the training of potential leaders for trade and industrial and technical education.

18. That Montana State University develop a graduate program leading to a Master's degree in vocational education.

19. That the State enter into an agreement with Northern Montana College concerning the training of teachers, full-time and part-time, for trade and industrial and technical education and provide Federal vocational education funds to supplement State funds.

20. That the Dean, Vocational-Technical Division, Northern Montana College be designated as the head State teacher trainer for trade and industrial and technical teacher education, and that for planning purposes he participate as a member of the staff of the State Supervisor of Trade and Industrial Education and the State Supervisor of Technical Education.

21. That the State office supply the State teacher trainer with data concerning the present group of trade and industrial and technical education teachers, and that such data be kept current.

22. That the State supervisors of trade and industrial and technical education and the institution charged with the responsibility of training trade and industrial and technical education teachers, develop workshops or institutes (or other inservice programs) which will enable teachers to keep abreast of the new developments in their teaching fields.

23. That a brochure be developed describing completely the certification requirements for trade and industrial and technical education teachers.

24. That the State staff continue their efforts to develop further Vocational Industrial Clubs of America (VICA) throughout Montana as a part of the vocational programs in trade and industrial and technical education.

25. That those school districts which do not offer at public expense adult education courses to those needing supplementary trade training find some means of publicly supporting this type of training either through the adult education tax levy or through some other publicly supported source of funds.

26. That all trade training programs offered in Centers for vocational-technical education be offered for a sufficient number of hours per day to assure mastery of skill and technical knowledge in the shortest possible time.

27. That a placement, follow-up, and follow-through data system be developed for all trade and industrial and technical education courses and for all students; and that summaries of these data be published periodically.

28. That the staff at Northern Montana College concerned with the training of trade and industrial and technical education teachers be expanded in order to provide realistic off-campus courses for teachers who need certification credit; and that the on-campus programs of teacher education be expanded (possibly involving off-campus work-experience for skill development) in order to provide for a greater variety of teachers in trade and industrial and technical education.

29. That the State supply periodically summaries of the "occupational demand" for all trade and industrial and technical occupations, and that such data be supplied to the vocational-technical education Centers.

30. That trade and industrial and technical education teachers and teacher educators participate in national leadership and professional development seminars, clinics, workshops, conferences, and other such meetings.

31. That the State Department of Public Instruction, when employing additional staff for trade and industrial education, give consideration to the employment of a person

qualified to develop further the training programs of health occupations as well as other programs for the training of girls and women who are planning to enter industrial employment.

32. That the following be considered as appropriate courses from which to choose in developing programs of trade and industrial and technical education in the vocational-technical education Centers of the State, and that the program be developed for each Center on the basis of carefully conducted studies of occupational needs for the region to be served by the Center:

    Aircraft and airframe
    Aircraft engines
    Auto body and fender
    Auto mechanics
    Small engine repair
    Automotive technician (tester)
    Beauty operators (cosmetologists)
    Carpenters
    Commercial cooks
    Construction technicians
    Custodians (janitors)
    Dental assistants
    Draftsmen
    Electrical technician
    Electrician (various kinds)
    Electronic technician
    Engineering aides and technicians
    Firemen, Fire Department
    Hospital attendants (nurses' aides)
    Heavy equipment operation and repair
    Diesel mechanics
    Lithographers (printing, etc.)
    Industrial maintenance service and repair (variety of mechanics and repairmen)
    Farm machinery mechanic
    Refrigeration and air conditioning mechanic
    Medical assistants and related health occupations
    Practical nurses
    Office machines (mechanics and service)
    Heavy construction machinery operators
    Photographers
    Policemen
    Programmer (engineering and scientific)
    Pulp and paper manufacturing occupations
    Radio and television repair and service
    Sheetmetal workers
    Welders

Concerning Montana's program of vocational guidance and occupational information, IT IS RECOMMENDED:

1. That the State staff clarify policies and prepare and distribute guidelines to school administrators, identifying program standards, criteria, reimbursement policies, and application procedures for assistance in vocational guidance; that such guidelines show relationships between vocational education funding and financial assistance available through such other programs as NDEA and ESEA; and that such guidelines incorporate and expand the existing "Policy Bulletin - Vocational Guidance."

2. That consideration be given to the expenditure of increased vocational education funds for guidance services at the State level, to include the preparation and publication of handbooks and other vocational guidance aids for local school counselors, the planning and coordination of vocational guidance seminars for school counselors, and the conducting of studies and the collecting of information important to the ongoing program.

3. That an organized program be developed and initiated to collect, or prepare, and disseminate informational materials covering occupational and labor market information, training opportunities, and the availability and use of nonschool resources for occupational information and vocational guidance.

4. That a study be initiated involving appropriate local administrators, counselor education personnel, and State staff to consider the revision of certification requirements for school counselors to bring them more in line with established professional practice in surrounding states and the country and to provide more definite guidelines to institutions preparing school counselors.

5. That consideration be given to the revision of the Basic Standards for Accreditation of Montana High Schools to strengthen Standard III C., Guidance and Counseling, in order to provide clear minimum standards and guidelines to school administrators for the development of adequate guidance services.

6. That policy be established and steps taken to discourage the assignment of school personnel in the dual role of administrator and counselor.

7. That appropriate steps be taken through conferences, consultation, and publication to encourage school administrators and counselors to give more attention to the vocational aspects of the school guidance program, including the provision of occupational and training information, vocational counseling, and services to improve student and parent attitudes toward occupations and courses other than those for the college bound.

8. That consideration be given to the support, on a demonstration or experimental basis, of one or more Mobile Vocational Guidance Units to provide scheduled guidance services in rural areas and concurrently to provide supervisory or consultative services to teacher-counselors in small rural schools.

9. That formal inservice education services in vocational guidance be increased by organizing for experienced counselors two- or three-week summer seminars which might well be run on a contract basis by existing counselor education institutions, with funding and consultative and resource help provided by the State, including the travel and living expenses of trainees.

10. That steps be taken to initiate an organized program of summer work experience for school counselors to provide them with greater understanding of jobs open to high school and vocational program graduates, that such a program be Statewide in coverage, and that such a program have the backing and assistance of the State guidance staff, at least through the planning stages.

11. That the State guidance staff work with vocational education leaders and school counselors in the determination of criteria for admission to post-secondary school programs and in the development of selection procedures, guidelines, and informational materials for use by counselors in schools which will be referring current students, recent graduates, or adults for vocational or technical training.

12. That, as area centers for vocational-technical education are developed, careful attention be given to programming and funding for adequate student personnel and guidance services, including such services as the following:

(a) Preparation of informational materials for the counselors of feeder schools

(b) Consultation with high school counselors regarding the courses, requirements, and procedures of the vocational-technical education Centers

(c) Provision of such student personnel services as admissions, testing, counseling, housing, financial aids, and placement

(d) Research and survey activities such as the development of selection procedures, predictive studies, follow-up studies

13. That the State Department of Public Instruction initiate (or encourage) and participate in a study of counselor education course offerings of the State institutions of higher education; and that, if deemed necessary, offerings be modified to provide (a) a proper balance of course offerings giving appropriate emphasis to the vocational aspects of guidance, (b) adequate provision for practicum experiences in a school setting, (c) appropriate attention to school guidance work at all levels and settings, and (d) recognition of the importance of coordinating all pupil personnel services.

14. That the State Superintendent of Public Instruction and the State Board of Education give serious consideration to the expansion of the professional services of the State Department of Public Instruction in the field of guidance and the close coordination of all State guidance services, regardless of source of funding, to ensure appropriate guidance services at all levels (elementary, secondary, post-secondary).

15. That the State Board and the State Department of Public Instruction consider the realignment of all existing State-level pupil personnel services (with expansion as found necessary) into a coordinated pupil personnel unit in the State Department supported by State as well as appropriate Federal funds.

Some Implications and Possible Outcomes

This survey report, especially Chapter 8, is replete with implications. Survey Principle 24 in Chapter 1 stipulates that a survey should point out some of the major implications of the recommendations made by the survey staff. This is done in the present report with the hope that the individual leaders and leadership groups of Montana will study the report, will weigh its findings and conclusions, will appraise its recommendations, will choose their goals, and will then move forward toward the achievement of these goals.

The ready response of some readers, especially the economy-minded and somewhat critical type, is likely to be, "This is all very fine, but where do we get the money?" It is true a number of the recommendations will require additional funds, but progress often "has to be bought," and a part of the purchase price is money, but money is not the complete price. For not all of the more than 200 recommendations of this report imply the need for more dollars. There are many recommendation which, for example, call for greater cooperation, or coordination, or for a different way of organizing personnel or utilizing materiel. Others require only changes in attitudes or points of view or in policies or procedures. These are "things of the spirit," and they can be achieved without the expenditure of a single additional penny. Their achievement may require a bit of "give and take" and a little extra "get up and at it"; there may be necessitated a bit more effective use of time; there may be need for increased concentration of intellect, interest, and industry; and perhaps there will need to be somewhat less preoccupation with recreation, the weather, and politics - but no real dependence on additional dollars.

In a number of instances there are recommendations for increased use of State and/or local advisory committees or councils. Some wit has said that "free advice is worth just what it costs," but he may have been more of a wit and less of a humanitarian realist. Often advice - particularly if it is from sincere, interested, and sophisticated persons - may indeed be priceless, largely because in these cases it is not a commodity for sale or purchase.

There are some basic recommendations that require a change in the State Constitution and/or State statutes. The news media of Montana, during the period of the survey, made members of the Survey Staff aware that some Montanans felt a need for types of legislative overhaul for aspects of the State's operation other than in the realm of education. Two examples were with regard to the large membership of both houses of the Legislative Assembly and the need for changes related to the State's judicial system. Apathy toward, or fear of, Constitutional change and a recognition that its achievement entails much effort can be strong deterrents, especially if the attitude is colored by the vested concerns of people economically or politically.

There are hints in the report that a reduction in the amount of "politics" in education would be a well-chosen direction. A 1958 educational study by an outside professional group reflected this existing danger in the Montana situation 10 years ago:

> The fundamental question to be answered is whether the office [State Superintendent of Public Instruction] is to provide the *political* leadership or the *professional* leadership for education. Both the method of selection and the qualifications for office determine the answer to be "political."[10]

The most far-reaching implications are those deriving from the recommended new type (component) of post-secondary vocational-technical education for Montana. This aspect of education seems now to be "neither fish nor fowl." In the "area" school the weight of control is with a single local school board of trustees, whose major function, under the American educational system, is *general* education. In the community college, the control appears to lie with a separate administrative board, but with a variety of sizes as regards the supporting area. In the higher education institutions, control lies with the Board of Regents, which is also the Board of Education and also the Board for Vocational Education. This same Board has approval powers for the establishment of the "area" school and community college and for much of the financing within these two types of institution. The Survey Staff's recommendations regarding the five vocational-technical education districts is a sane approach to giving a discreteness and a clarity to the purposes and operation of vocational-technical education which it has never had in Montana. Certain phases of vocational-technical education are, in the Master Plan, reserved for the public schools under local boards of school trustees; other aspects of this type of program are placed in the legal hands of a different kind of board of education with a much larger, but *definitely delineated*, supporting area and with no "islands" left as is bound to occur under the present plan of area school designation and operation. Furthermore, under the new plan a broader and more definite tax base will be created. A more definite and increased geographical area and total population will constitute the institution's supporting community and should result in a more definite identification by students and citizens with the Center since it is *in their district*. The practice of "claim jumping" and educational "gerrymandering" should be minimized. There will be greater opportunity for more efficient planning and a reduction of undue competition and unnecessary duplication; and there can be more optimum utilization of staff, buildings, and equipment through the four-quarter (around the year) plan of administrative operation.

In addition to the greater distinctiveness provided for vocational-technical education in Montana, the recommendations provide for a number of other significant and promising emphases and implied outcomes:

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[10] *Public Schools of Montana: A Report to Montana Taxation-Education Commission,* Division of Surveys and Field Services, George Peabody College for Teachers, Nashville, Tennessee, 1958, p. 4.

1. There should be increased cooperation and coordination among professional personnel and between the educational profession and the lay citizenry.

2. There should be increased communication - much of it written - within the profession and with the supporting communities.

3. There should be more effort and financial resources devoted to more planned research - in local school districts, in the State Department of Public Instruction, in the recommended new vocational-technical Centers, and in the units of the System of Higher Education.

4. There should result an expanded program of vocational-technical education and industrial arts, an improved preservice and inservice program of teacher education for vocational-technical education, and increased clarification of certification requirements.

5. There should be an ever increasing challenge to Montana leadership - educational, economic, industrial, business, labor, and political - for improving vocational-technical education for the youth and adults of Montana.

6. All these outcomes, which are indeed forward looking, should make Montana a more inviting place for new business and industry to find a home.

APPENDIX

Sixteen Tables of Comparative Data about the Five Recommended Districts for Vocational-Technical Education in Montana

TABLE 1 - COMPOSITION (COUNTY AND LAND AREA) AND POPULATION DENSITY OF THE DISTRICTS

Vo-tech education district	Number of counties included		Land area		Density per square mile based on 1960 population		
			Number of square miles	Per cent of total	For the counties in the district		For the district
	No.	%			Range	Median	
A	16	28	46,973	32.2	0.4 - 5.2	2.15	2.25
B	10	18	25,952	17.8	1.6 - 27.6	3.55	5.69
C	11	20	24,745	17.0	0.5 - 30.0	2.10	5.32
D	10	18	24,622	16.9	1.1 - 64.9	3.80	6.27
E	9	16	23,444	16.1	1.7 - 17.1	3.40	5.78
State	56	100	145,736	100.0	0.4 - 64.9	2.60	4.63

Source: U. S. Census reports.

TABLE 2 - POPULATION OF THE RECOMMENDED DISTRICTS FOR THE LAST FOUR DECADES

Vo-tech education district	1930		1940		1950		1960	
	Number	%	Number	%	Number	%	Number	%
A	111,929	20.8	102,150	18.3	95,441	16.1	105,576	15.6
B	105,041	19.5	107,490	19.2	118,318	20.0	147,636	21.9
C	95,452	17.7	100,111	17.9	111,352	18.9	131,530	19.5
D	140,724	26.3	143,432	25.6	145,158	24.6	154,482	22.9
E	84,460	15.7	106,273	19.0	120,755	20.4	135,543	20.1
State	537,606	100.0	559,456	100.0	591,024	100.0	674,767	100.0

Source: U. S. Census reports.

TABLE 3 - POPULATION CHANGE IN THE DISTRICTS FROM 1950 TO 1960

Vo-tech education district	Number of counties that			Counties in the district		Per cent change for total district
	Decreased in population	Increased less than 10%	Increased more than 10%	Range of change (per cent)	Median change (per cent)	
A	9	4	3	-11.0 to +50.4	- 2.85	+10.6
B	2	2	6	- 5.0 to +38.4	+17.40	+24.8
C	7	3	1	-18.8 to +41.4	- 5.10	+18.1
D	3	3	4	-13.1 to +25.8	+ 8.75	+ 6.4
E	3	2	4	- 5.8 to +45.9	+ 8.70	+11.2
State	24	14	18	-18.8 to +50.4	+ 1.90	+14.2

Source: U. S. Census reports.

TABLE 4 - RURAL-URBAN STATUS OF THE COUNTIES COMPRISING THE DISTRICTS, AND NUMBER OF PLACES OF 2,500 OR MORE POPULATION IN 1960

Vo-tech education district	Status of counties in district			Places of 2,500 or more population		
	No. 100% rural	No. more than 50% rural	No. more than 50% urban	No. of these	Their combined population	% of total for district
A	11	3	2	5	31,270	29.6
B	5	2	3	5	77,318	52.4
C	7	1	3	5	70,491	53.6
D	4	--	6	6	85,438	55.3
E	5	2	2	5	47,715	35.2
State	32	8	16	26	312,232	46.3

Source: U. S. Census reports.

TABLE 5 - NET MIGRATION IN MONTANA, 1950-1960 DECADE, AND NUMBER AND PER CENT OF 1960 POPULATION BORN IN THE STATE

Vo-tech education district	Net migration, % of 1960 population		1960 population of the district			
	For the counties in the district		Net migrants		Born in Montana	
	Range	Median	Persons	% of pop.	Persons	% of pop.
A	-29.3 to +16.8	-21.1	-10,413	-9.9	58,983	56
B	-24.1 to + 9.5	- 6.8	+ 1,087	+0.7	85,303	58
C	-30.5 to +12.1	-17.7	- 777	-0.6	72,466	55
D	-21.7 to +12.0	- 2.1	-10,857	-7.0	95,725	62
E	-18.7 to +18.0	- 3.4	- 4,221	-3.1	72,244	53
State	-30.5 to +18.0	-12.0	-25,181	-3.7	384,721	57

Source: Charles A. Stoerzinger, Current Economic Progress Report for the Upper Midwest, 1964, October, 1965, pp. 96-97; and U. S. Census Reports.

TABLE 6 - MONTANA'S ESTIMATED POPULATION FOR 1964 AND PROJECTED POPULATION FOR 1970

Vo-tech education district	Estimated population for 1964		Projected population for 1970			
	Upper Midwest R & D Council		State Planning Board		Montana Tax Study	
	Number	Per cent	Number	Per cent	Number	Per cent
A	114,200	15.9	104,850	14.1	116,531	15.1
B	162,500	22.7	175,798	23.6	183,044	23.7
C	138,600	19.3	148,982	20.0	155,085	20.1
D	160,300	22.3	160,539	21.5	163,351	21.2
E	142,500	19.8	155,111	20.8	153,210	19.9
State	718,100	100.0	745,280	100.0	771,221	100.0

Source: Charles A. Stoerzinger, Current Economic Progress Report for the Upper Midwest, 1964, October, 1965, pp. 94-95; Montana's Department of Planning and Economic Development, Montana Statistical Review, p. 35; and William D. Diehl, Montana Tax Study, Part Four: Human Resource Analysis, Appendix Table 1.

TABLE 7 - PROPORTION OF THE MONTANA 1960 POPULATION AND OF THE PROJECTED 1970 POPULATION IN EACH AGE GROUP

Vo-tech education district	Per cent of population in each age group						Total population
	Under 5	5-13	14-17	18-21	22-64	65 & over	
				1960 population			
A	13.4	20.3	6.7	5.3	44.6	9.7	105,580
B	13.8	19.6	6.5	5.5	46.5	8.1	147,634
C	12.1	19.9	6.6	5.0	46.9	9.5	131,533
D	11.1	17.9	6.7	5.4	48.4	10.5	154,436
E	11.4	18.9	6.8	5.5	46.7	10.7	135,544
State	12.3	19.2	6.6	5.4	46.8	9.7	674,727
				Projected 1970 population			
A	12.5	20.3	7.7	6.5	44.4	8.6	116,531
B	12.4	19.9	7.8	7.3	45.6	7.0	183,044
C	11.9	18.7	7.7	6.7	46.1	8.9	155,085
D	11.2	17.5	7.8	7.2	46.1	10.2	163,351
E	11.5	18.6	7.9	7.0	44.8	10.2	153,210
State	11.9	18.9	7.8	7.0	45.5	8.9	771,221

Source: William D. Diehl, _Montana Tax Study, Part Four: Human Resource Analysis,_ Appendix Table 1.

TABLE 8 - PROPORTION OF THE MONTANA 1960 LABOR FORCE AND OF THE PROJECTED 1970 LABOR FORCE IN EACH AGE GROUP

Vo-tech education district	Per cent of labor force in each age group						Total labor force
	14-17	18-24	25-34	35-44	45-64	65 & over	
				1960 Labor Force			
A	5.4	14.3	21.2	22.1	30.3	6.7	38,409
B	4.7	15.4	21.9	22.5	30.3	5.2	56,431
C	5.5	12.2	19.9	24.7	32.1	5.6	50,426
D	4.8	12.0	17.8	22.8	36.8	5.8	59,261
E	5.3	12.9	18.7	22.4	34.8	5.9	49,855
State	5.1	13.3	19.8	22.9	33.1	5.8	254,382
				Projected 1970 Labor Force			
A	6.0	18.7	20.3	18.7	30.6	5.7	43,663
B	6.0	20.9	21.6	18.1	29.1	4.3	72,102
C	6.6	17.4	18.6	19.8	32.4	5.2	61,343
D	6.1	16.6	18.7	17.1	35.8	5.7	62,181
E	6.3	17.3	18.6	17.9	34.3	5.6	56,181
State	6.2	18.3	19.6	18.3	32.4	5.2	295,470

Source: William D. Diehl, _Montana Tax Study, Part Four: Human Resource Analysis,_ Appendix Table 3.

TABLE 9 - ENROLLMENTS OF MONTANA PUBLIC HIGH SCHOOLS*, 1962-63 THROUGH 1966-67

Vo-tech education district	1962-63		1963-64		1964-65		1965-66		1966-67	
	No.	%	No.	%	No.	%	No.	%	No.	%
A	6,883	18.4	7,442	18.6	7,643	18.2	7,804	18.2	7,881	18.0
B	7,777	20.7	8,127	20.4	8,467	20.2	8,806	20.5	8,910	20.3
C	7,063	18.8	7,438	18.6	7,911	18.9	7,865	18.4	8,029	18.3
D	6,654	17.8	7,199	18.0	7,491	17.9	7,831	18.2	7,951	18.1
E	9,094	24.3	9,761	24.4	10,424	24.8	10,594	24.7	11,085	25.3
State	37,471	100.0	39,967	100.0	41,936	100.0	42,900	100.0	43,856	100.0

Source: Montana Educational Directory, 1962-1963 through 1966-1967.

TABLE 10 - GRADUATES FROM MONTANA PUBLIC SCHOOLS, 1962-63 THROUGH 1966-67

Vo-tech education district	1962-63		1963-64		1964-65		1965-66		1966-67	
	No.	%	No.	%	No.	%	No.	%	No.	%
A	1,283	17.4	1,449	17.3	1,568	15.8	1,659	16.6	1,676	16.3
B	1,533	20.7	1,659	19.9	2,021	20.3	2,115	21.2	2,137	20.8
C	1,520	20.6	1,747	21.0	2,157	21.7	2,065	20.7	2,125	20.7
D	1,450	19.6	1,648	19.8	1,952	19.6	1,908	19.1	1,983	19.3
E	1,607	21.7	1,832	22.0	2,243	22.6	2,245	22.4	2,352	22.9
State	7,393	100.0	8,335	100.0	9,941	100.0	9,992	100.0	10,273	100.0

Source: High school principals' annual reports, filed in the offices of the State Department of Public Instruction.

TABLE 11 - ENROLLMENTS IN MONTANA PUBLIC HIGH SCHOOLS*, 1967-68

Vo-tech education district	No. of high schools	Enrollment for the high schools in the district	Enrollment for the individual schools					
			Range	Median	Average	Schools of less than 300 enrollment		
						No. of schools	Total enrollment	% of district
A	42	7,750	13- 852	112	185	35	3,740	48.3
B	37	9,285	24-1,695	148	251	30	3,345	36.0
C	37	8,131	25-1,971	81	220	32	2,951	36.3
D	24	7,820	33-1,702	140	326	18	1,896	24.2
E	33	11,572	46-1,761	155	351	22	2,645	22.9
State	173	44,558	13-1,971	118	258	137	14,577	32.7

Source: 1967-1968 Montana Educational Directory.

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* Exclusive of junior high schools (applies to both Table 9 and Table 11).

TABLE 12 - ENROLLMENTS, AUTUMN 1967, IN THE STATE UNIVERSITIES AND COLLEGES (MONTANA UNIVERSITY SYSTEM AND COMMUNITY COLLEGES)

Vo-tech education district	Montana University System		Community colleges		State total		
	Number of schools	Autumn 1967 enrollment	Number of schools	Autumn 1967 enrollment	Number of schools	Autumn 1967 enrollment	Per cent
A	--	--	2	664	2	664	3.3
B	1	1,284	--	--	1	1,284	6.3
C	1	3,145	--	--	1	3,145	15.4
D	3	8,269	--	--	3	8,269	40.5
E	1	6,407	1	619	2	7,026	34.5
State	6	19,105	3	1,283	9	20,388	100.0

Source: Office of the Executive Secretary, the Montana University System, Helena, Montana; and SCHOOL SURVEY SERVICE questionnaires.

TABLE 13 - 1967 GRADUATES FROM MONTANA HIGH SCHOOLS ENROLLED AUTUMN 1967 IN UNIVERSITIES AND COLLEGES OR IN POST-SECONDARY SCHOOLS OR PROGRAMS WITHIN THE STATE

Vo-tech education district	Universities and colleges in Montana			Post-secondary schools or programs			1967 high school graduates enrolled in school autumn 1967	
	Number	1967 H. S. graduates enrolled	Per cent	No. of schools involved	1967 H. S. graduates enrolled	Per cent	Number	Per cent
A	2	272	5.0	1	16	1.3	288	4.3
B	2	639	11.8	5	248	20.2	887	13.4
C	2	1,058	19.6	5	456	37.1	1,514	22.8
D	4	2,248	41.5	7	371	30.2	2,619	39.4
E	2	1,196	22.1	4	138	11.2	1,334	20.1
State	12	5,413	100.0	22	1,229	100.0	6,642	100.0

Source: An unpublished study by Max L. Amberson, 1967.

TABLE 14 - EMPLOYERS, WORKERS, AND WAGES IN MONTANA'S INDUSTRIES, 1964

Vo-tech education district	All covered industry					
	Employers		Workers		Wages	
	Number	Per cent	Number	Per cent	Amount	Per cent
A	2,283	14.6	10,109	10.5	$ 39,719,994	8.9
B	3,231	20.7	19,617	20.3	90,757,133	20.3
C	3,322	21.2	20,663	21.4	97,929,060	22.0
D	3,511	22.5	23,892	24.8	115,892,933	25.9
E	3,287	21.0	22,191	23.0	102,675,145	22.9
State	15,634	100.0	96,472	100.0	$446,974,265	100.0

Source: Montana State Planning Board and Production Surveys of Montana, The Industrial Manifest of Montana, 1966, p, 29.

Note: These data exclude certain industries considered Statewide and not confined to a single county.

TABLE 15 - INDUSTRIAL GROUPS OF THE PERSONS EMPLOYED IN MONTANA IN 1960 AND TOTAL NUMBER UNEMPLOYED AT THAT TIME

Vo-tech education district	Agriculture, Forestry, & Fisheries		Mining		Construction		Manufacturing		Transportation and Utilities	
	Number	%	Number	%	Number	%	Number	%	Number	%
A	10,946	26.8	558	8.2	2,644	17.7	1,031	4.4	2,947	14.0
B	9,344	22.9	554	8.2	3,446	23.1	4,031	17.1	4,532	21.6
C	8,004	19.6	1,032	15.2	3,063	20.6	4,071	17.4	4,430	21.1
D	6,340	15.5	4,008	59.1	3,088	20.7	6,250	26.7	5,029	23.9
E	6,210	15.2	630	9.3	2,670	17.9	8,056	34.4	4,075	19.4
State	40,844	100.0	6,782	100.0	14,911	100.0	23,439	100.0	21,013	100.0

TABLE 15 (continued)

Vo-tech education district	Wholesale and Retail Trade		Finance, Insurance, and Real Estate		Services, Government, and Others		Total employed		Unemployed	
	Number	%	Number	%	Number	%	Number	%	Number	%
A	6,465	13.7	745	9.3	9,465	13.7	34,801	15.1	2,086	12.9
B	10,416	22.1	1,915	23.8	14,575	21.1	48,813	21.1	2,982	18.5
C	10,834	23.1	2,097	26.1	13,931	20.1	47,462	20.5	2,706	16.8
D	10,621	22.5	1,981	24.7	18,242	26.4	55,559	24.0	3,426	21.3
E	8,758	18.6	1,297	16.1	12,939	18.7	44,635	19.3	4,922	30.5
State	47,094	100.0	8,035	100.0	69,152	100.0	231,270	100.0	16,122	100.0

Source: U. S. Census reports.

TABLE 16 - TAXABLE VALUE FOR 1965 AND 1966 AND TOTAL OF ALL TAXES LEVIED

Vo-tech education district	Taxable value				Total of all State taxes	
	1965		1966		1966	
	Amount	Per cent	Amount	Per cent	Amount	Per cent
A	$153,397,450	19.6	$157,834,018	19.1	$1,056,858	20.0
B	178,721,442	22.8	185,636,379	22.5	1,172,135	22.2
C	163,522,495	20.8	167,077,617	20.3	1,071,498	20.3
D	148,961,883	18.9	164,165,440	20.0	1,051,158	19.9
E	140,462,225	17.9	149,765,458	18.1	927,127	17.6
State	$785,065,495	100.0	$824,478,912	100.0	$5,278,776	100.0

Source: Montana's Department of Planning and Economic Development, Montana Statistical Review, pp. 45-46.